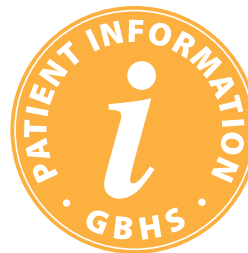


Before, During & After

Knee Replacement Surgery



A Patient's Guide

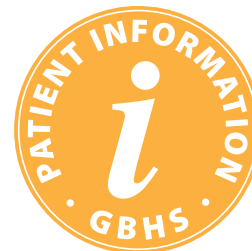


Acknowledgment:

This booklet was originally produced by Vancouver Coastal Health and the Osteoarthritis Service Integration System (OASIS). Grey Bruce Health Services (GBHS) would like to generously thank them for permitting us to reproduce this booklet. Some of the information has been slightly adapted by GBHS.



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You are about to have knee replacement surgery.

Patients who are prepared for surgery and who take part in their care can recover in less time, with less pain and regain their independence.

This booklet will give you the general information you need to get yourself, your family and your home ready for surgery.

Read this booklet and bring it to the hospital when you go for the operation.

We hope that you find this booklet a useful reference guide before, during and after your joint replacement surgery.

IMPORTANT

If your surgeon or health care team gives you different advice than what has been provided in this booklet, please follow the specific directions you receive.

Do you still have questions about joint replacement surgery?

Would you like to talk to someone who has gone through the surgery?

If so, Ortho Connect is for you! It is a program through the Canadian Orthopedic Foundation that will connect you with a volunteer who has gone through a similar surgical treatment. You will be able to ask the volunteer questions about what to expect and get useful tips on how to cope.

*More information is available at:
whenithurtstomove.org*

Phone 1-800-461-3639

Or email: mailbox@canorth.org



GREY BRUCE
Health
SERVICES
www.gbhs.on.ca

Knee Surgery

In this section, you will learn about:



Knee anatomy and disease



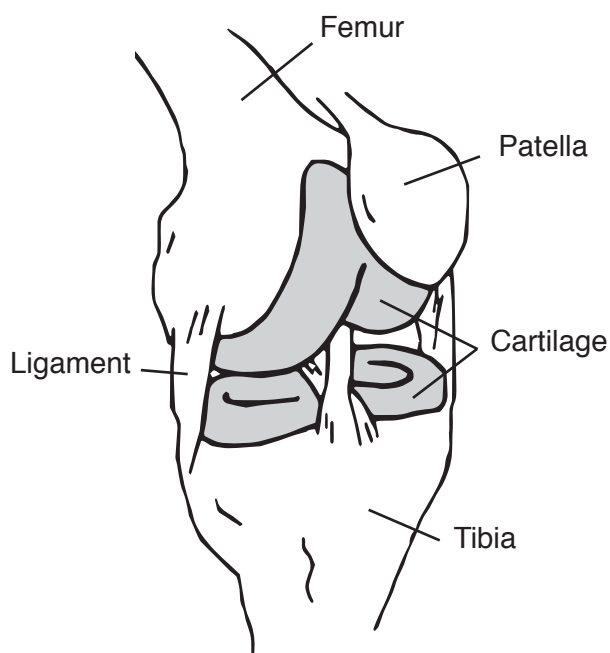
Knee replacement surgery



Knee precaution

Knee Anatomy

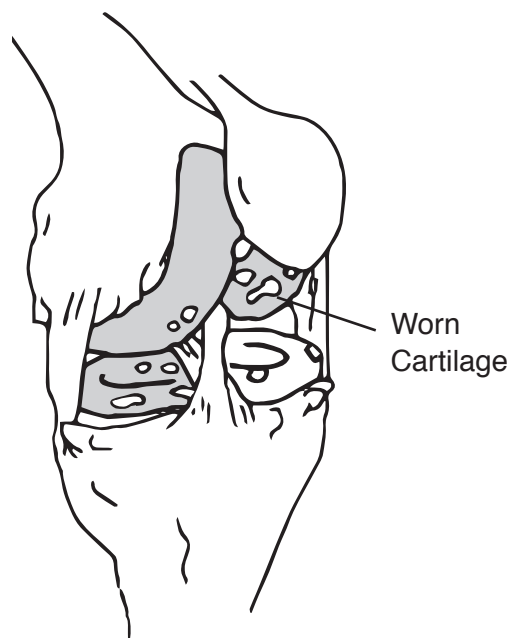
- The knee joint is where the thigh bone (femur) meets the shin bone (tibia). The knee is a hinge joint that allows you to bend and straighten your leg.
- There is a smooth elastic type tissue (cartilage) that covers the bone. This tissue protects the surfaces of these two bones.
- Muscles and ligaments support and strengthen the joint.



Normal Knee Joint

Knee Disease

- The most common reason for joint replacement surgery is osteoarthritis. Osteoarthritis results in the breakdown of cartilage on the ends of the bones. It usually appears in joints that carry your body weight, such as hips and knees.
- Osteoarthritis, rheumatoid arthritis, injury, bone infection or lack of blood supply to the bone can cause joint pain and stiffness.
- Pain is most commonly felt in the knee, thigh, calf, ankle and/or foot.
- Advanced joint damage can be repaired through joint replacement surgery.
- Talk to your doctor if you have questions about your joint health.



Osteoarthritic Knee Joint

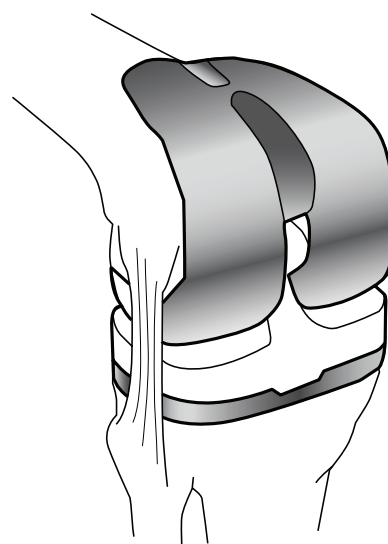
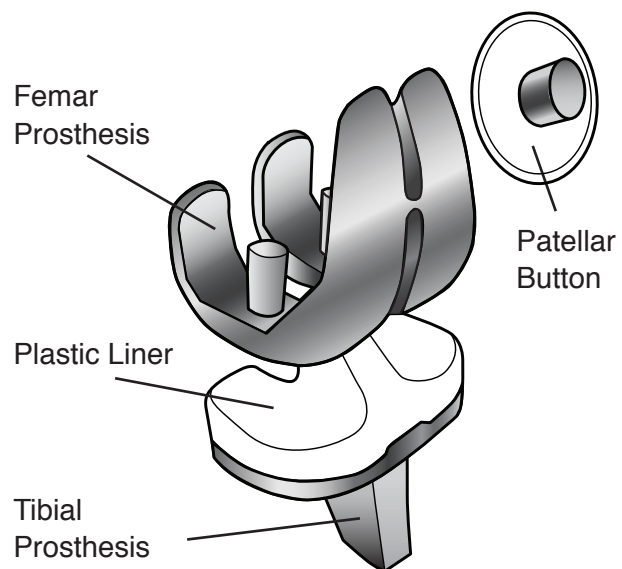
Total Knee Replacement

In total knee replacement surgery, the surgeon replaces the diseased joint with an artificial joint (prosthesis).

First, the surgeon makes an incision and moves the muscles and ligaments away from the knee joint. Then 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 (patella) is damaged, it may be resurfaced or lined with a plastic disc.

Once the new joint is in place, your skin is closed with staples, which are metal clips that hold your skin together while the incision heals. This surgery takes less than two hours.

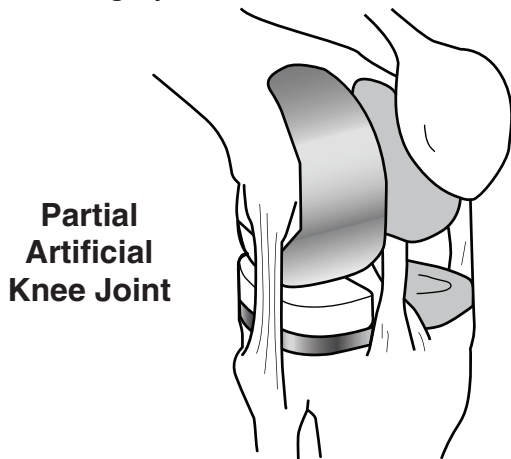
Today, many patients who have knee replacement surgery can move their joint better, have less pain and are able to walk more comfortably.



Artificial Knee Joint

Unicompartmental (Partial) Knee Replacement

If you only have bone damage on one side of your knee, your surgeon may decide that you are suitable for a partial knee replacement surgery. As with total knee replacement surgery, the surgeon reshapes the damaged bone to fit the artificial joint (prosthesis). Many people who have this type of surgery recover more quickly. These people are often sent home the day after surgery.



Bilateral (Both) Knee Replacement

In some cases, a surgeon may decide that both knees need to be replaced at the same time. This depends on a number of factors including your overall health, joint damage, and lifestyle. The surgery will be the same as a total knee replacement. Your hospital stay may be slightly longer and you may need more rehabilitation after surgery to help you get back to your daily activities.

Knee Revision (Repeat)

Some people who have had a knee replacement need another surgery. This can be because:

- Your new joint is loose or worn out
- You had bone loss or an infection in the joint

These surgeries can be more complex and you may need more therapy.

Joint Components (Prostheses)

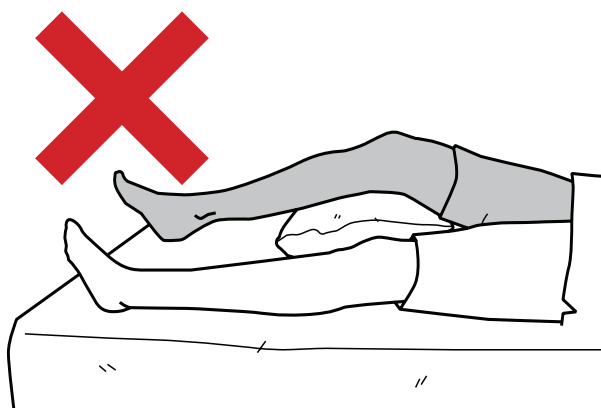
Artificial knee joint components are made of medical-grade metal and plastic. There can be differences in the anatomy of men's knees and women's knees. Your surgeon may choose a "gender-specific" knee joint for you, depending on the shape of your knee.

Knee Precautions

After surgery, you will need to follow knee precautions unless otherwise advised by your surgeon.

These activity restrictions will help your joint to heal and reduce stiffness in the new joint. See "Complications" section for more information.

Shaded leg is the surgical leg.

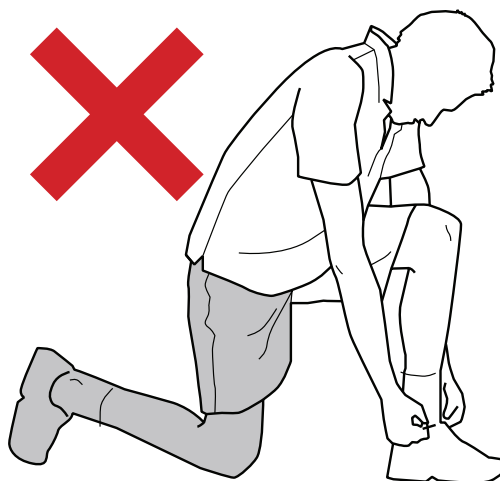


DO NOT put a pillow under knee. The knee will become stiff if you keep it bent.



DO NOT do deep squats (squatting down to the floor).

DO NOT kneel on your new knee joint.



Additional Notes for Knee Surgery and Precautions:

**Please ask your therapist if you do not understand these rules.*

Before Surgery

In this section, you will learn about:



Home set-up



Homemaking



Bathroom seating



Required equipment



Exercise



Nutrition

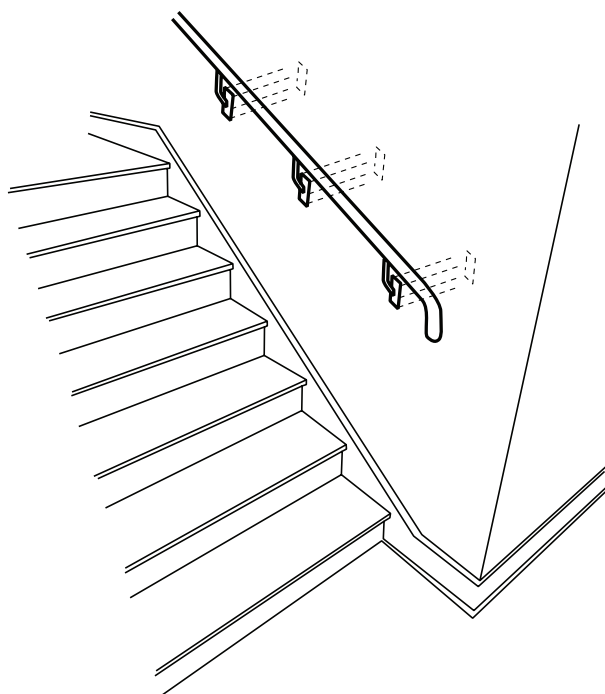


Final checklists

Home Set-Up

It is important to set up your home **BEFORE** joint surgery. This reduces the risk of falls and helps maintain your knee joint precautions.

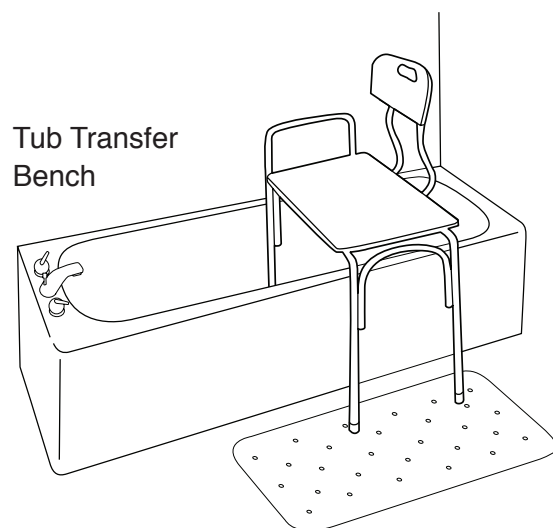
Secure Stair Rails



- Ensure hallways and rooms are free of clutter and tripping hazards (e.g. scatter rugs, footstools, telephone and electrical cords, etc.).
- Add non-slip surfaces to outside stairs and walkways.
- Install stair railings or make sure the existing ones are secure.
- Set up a firm chair with armrests.
- Ensure good lighting in hallways and other well used areas.
- Use night lights, especially between the bedroom and the bathroom.
- Keep ice packs in your freezer for possible joint swelling after surgery. Or, you can use a bag of frozen vegetables wrapped with a towel.
- Have a thermometer at home to check your temperature if needed.
- Wear non-skid, supportive footwear at all times.
- Wear eye glasses as required.
- DO NOT wax or polish the floors.
- DO NOT try moving too quickly. Let people know that it will take longer to get to the phone or the door.
- Make arrangements before your surgery to stay with family, friends or a retirement home if you feel you cannot manage at home following surgery.

Homemaking - Plan Ahead

- Arrange for extra help from family or friends for about 6 weeks with household tasks that involve heavy lifting, bending or twisting if needed (e.g. vacuuming, laundry, changing bed linen, garbage).
- Stock your freezer/pantry with healthy foods and snacks. Private food/meal delivery services such as Meals on Wheels may be available in many areas.
- Move frequently used household items to counter height (e.g. pots and pans). Consider moving items in the lower parts of the fridge/freezer to a higher shelf. For items placed high or low, use a reacher.
- Rather than bending down to the oven, use a microwave or toaster oven at counter height.
- Many jobs in the kitchen can be managed safely and easily by sitting on a high stool or chair. For example, preparing food at the counter.



Bathroom

- DO NOT get down into a bathtub for at least 6 weeks or until precautions are removed. Reminder: Do not kneel on operated knee.
- DO NOT soak incision until it is fully healed.
- You can shower when the incision is dry and there is no drainage (usually about 3-5 days after the surgery).
- A commode can be used elsewhere in the home if there is not a toilet nearby (e.g. no bathroom on the main floor or near the bed at nighttime).
- Remove sliding doors from your bathtub and replace with a shower curtain.
- If recommended, set up a tub transfer bench in the bathtub or a shower chair in a shower stall.
- Use a non-slip bathmat both inside and outside the bathtub or shower.
- Install a hand-held shower head which makes bathing easier while sitting.
- Use a long handled sponge to help wash feet.
- Grab bars in the bathtub/shower stall and by the toilet are very useful.
- Do NOT use towel racks, soap dishes, toilet paper holders, or curtain rods to assist you to stand or sit.

Required Equipment

Order and set up your equipment in your home 1-2 weeks BEFORE your surgery date so you can practice as instructed by Physiotherapy Therapy.

Name Label:

Seat Height:

Mobility Aids	Bathroom and Other Aids	Aids
Handle Height: <input type="text"/>		
<ul style="list-style-type: none"> • Crutches: 2-3" from armpit to top of crutch • Standard Walker • 2 Wheeled Walker • Single Point Cane • Quad Cane • Standard Wheelchair • Wheelchair <ul style="list-style-type: none"> <input type="checkbox"/> Elevating Legs <input type="checkbox"/> Foam Cushion <input type="checkbox"/> _____ Width _____ " Depth _____ " Height _____ "	<ul style="list-style-type: none"> • Bath Transfer Bench • Bath Seat with Back • Raised Toilet Seat • Stationary Commode • Bed Rail • Toilet Safety Frame 	<ul style="list-style-type: none"> • Long Handled Reacher • Long Handled Sponge • Sock Aid • Long Handled Shoehorn • Elastic Shoe Laces • Wedge Cushion • Chair/Couch Raisers • Hand-Held Shower Head • Non-Skid Bath Mat

Highlighted items are recommended for you to obtain/purchase.

Please tell your vendor that you need to rent this equipment for _____ months.

Referred by (signature and profession):

Print Name: _____

Referral Site: GBHS Owen Sound

Phone #: (519) 376-2121 x2895, Fax (519) 372-3939

Exercise Before Surgery

Exercising before surgery will help you have a faster and easier recovery.

Do activities that put less stress on your joint. Try:

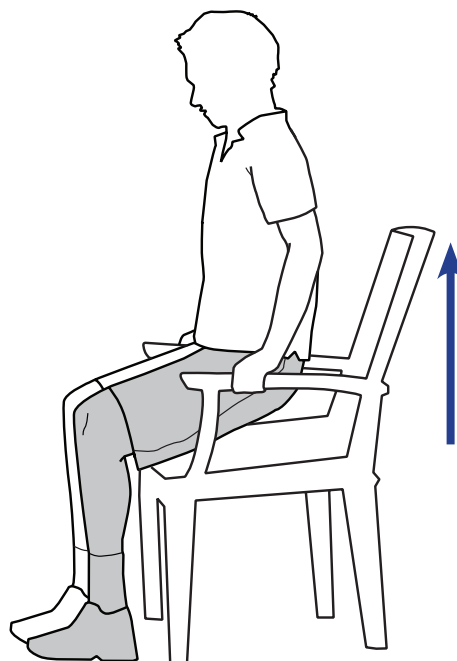
- exercises in water, such as swimming or water walking at a community pool,
- cycling,
- Nordic pole walking,
- gentle stretching, strengthening, and specific exercises suggested by a physiotherapist,
- balance exercises (valuable in preventing falls).

These activities will make your muscles strong, improve your endurance and help keep your joint moving. Exercising before surgery will also help you to build up your confidence and knowledge of how to exercise after surgery.

**REMEMBER: After surgery, daily exercise will be part of your recovery for many months.*

Be sure to strengthen your arm muscles. You will need strong arms after your surgery to use walking aids, get in and out of bed, and get on and off a chair. If possible, do strengthening exercises before surgery.

Always talk to your family doctor before starting a new exercise program. If you don't know how to get started, talk to your family doctor or a physiotherapist.



Exercises for your knee should be practiced before surgery.

See page 23 for exercises #1-5. These should be completed at least once daily up until your surgery.

NUTRITION

Good nutrition helps you to recover from surgery and reduces the risk of infection. Important nutrients before and after surgery include:

Protein

Protein promotes healing after surgery. To meet increased protein needs, try to eat at least 3 servings of meat, meat alternatives, milk or milk alternative per day. For example:

Meat and Alternatives

1 serving =

- > 2-3 oz. of meat, poultry or fish
- > 2 eggs
- > 3/4 cup beans
- > 2 tablespoons peanut butter
- > 3/4 cup tofu

Milk and Alternatives

1 serving =

- > 1 cup milk or soy beverage
- > 2 ounces cheese
- > 3/4 cup yogurt

Calcium and Vitamin D

Calcium and Vitamin D are important for strong bones. Adults should have 2 to 3 servings of milk or calcium-fortified products a day. A minimum of 400IU Vitamin D supplement is recommended for all people over 50 years old. Talk to your doctor, pharmacist or dietitian about current supplement recommendations that are right for you.

Fibre and Water

It's important to have a regular bowel habit before joint surgery because constipation can be a complication. Include fibre in your diet, such as whole grains, bran, fruits, vegetables, beans and lentils. Spread the fibre throughout the day and drink at least 8 glasses of water or other low-calorie fluid a day.

*For more information about nutrition, see Canada's Food Guide:
www.healthcanada.gc.ca/foodguide*

Pre-surgical Checklist

Complete before day of surgery.



- | | |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> I reviewed my rules for protecting my knee and know how they will affect my daily activities. | <input type="checkbox"/> I have help to care for my pets. |
| <input type="checkbox"/> I am aware I will return slowly to my usual activities. | <input type="checkbox"/> I practiced walking with my walker or crutches. |
| <input type="checkbox"/> I made plans for loose fitted clothing. | <input type="checkbox"/> I practiced getting in and out of bed. I practiced the exercises once a day. |
| <input type="checkbox"/> I arranged for help with personal care (toe nails, shaving, etc.). | <input type="checkbox"/> I practiced going up and down stairs, if needed. |
| <input type="checkbox"/> I have arranged for the correct equipment at home (see required equipment page). | <input type="checkbox"/> I practiced dressing with my dressing equipment if required. |
| <input type="checkbox"/> I moved items I use regularly so that I do not have to reach up or bend over. | <input type="checkbox"/> I practiced using the bath bench, if needed. |
| <input type="checkbox"/> I prepared and froze meals for when I return home. | <input type="checkbox"/> I practiced getting in and out of my vehicle. |
| <input type="checkbox"/> I arranged for help of family and friends with shopping, laundry, basic housework. | <input type="checkbox"/> I arranged for rides to my appointments for at least 6 weeks. |
| <input type="checkbox"/> I arranged to stay with someone or somewhere else, if needed. | <input type="checkbox"/> I have arranged for my ride home to keep my walking aid in the vehicle. |
| <input type="checkbox"/> I will have a phone that can be carried with me or will have someone with me at all times. | <input type="checkbox"/> I washed with the pre-wash solution the night before my surgery. |
| <input type="checkbox"/> I removed clutter around the house so that I can move around with my walker/crutches easily. | |

A FINAL Checklist

1 Day Before Surgery.



By now you should have picked up your medical equipment and set up your home. Here is a final checklist of things you need to do before coming to the hospital.

Please do not bring valuables to the hospital.

- ☐ I have made arrangements for transportation to and from the hospital.
- ☐ I have made arrangements for someone to stay with me or be nearby for at least the first 72 hours after I leave the hospital.
- ☐ I will use the antiseptic body cleanser cloths the morning of my surgery. (I will not shave my legs as any cuts or skin irritation may result in my surgery being cancelled).
- ☐ I have packed my bag for the hospital including:
 - ☐ Patient Education Booklet,
 - ☐ Toiletry items (e.g. toothbrush, toothpaste, hair brush, Kleenex, etc.),
 - ☐ Loose fitting pajamas/housecoat/clothes to exercise in and to wear home,
 - ☐ Comfortable shoes/slippers with non-slip soles that allow some room for potential swelling (such as Crocs, Birkenstocks).
- ☐ If you wear elastic support stockings, bring them with you.
- ☐ Bring eye glasses and reading materials.
- ☐ Bring hearing aids and extra batteries.

During Your Hospital Stay

In this section, you will learn about:



Day of surgery



Bed exercises



Length of hospital stay



Physical activity



Pain control



Blood-thinner medication



Going home

Day of Surgery

Before Surgery:

- Depending on your arrival time, go to the Central Registration Desk or Emergency in the hospital.
- Bring all of your medications with you, as directed by the Pre-Surgical Clinic.
- To prepare for surgery, you will change into a hospital gown and a nurse may start an intravenous line (IV) in your arm.
- You may be swabbed for antibiotic resistant bacteria.

During Surgery: Anesthesia

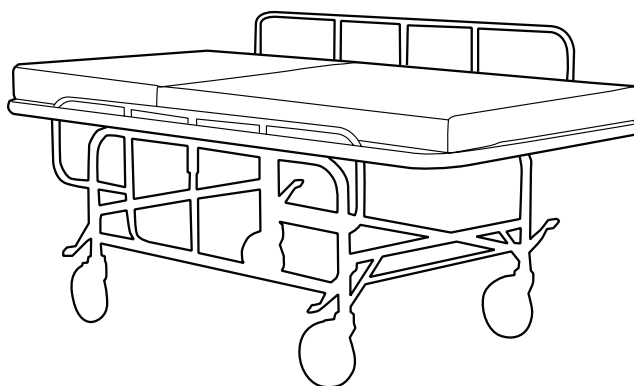
Many people who have joint replacement surgery have a spinal anesthetic. This is like the freezing you get at the dentist, except this freezing is put through a small tube that goes into a small place between the bones in your back and makes you numb from the chest down. This medicine stops you from feeling pain.

The anesthesiologist will make sure you are comfortable throughout the surgery, giving you medicine through your IV that makes you relaxed and sleepy. If you have a spinal anesthetic, you will not be able to move your legs for up to 4 hours after surgery but may have pain relief for 12-24 hours.

Some people receive a general anesthetic. This is a combination of drugs that will make you unconscious during the surgery. Once you are alert, you will be able to move your legs right away.

After Surgery: Recovery Room

- You are moved from the operating room to the recovery room.
- You may have oxygen by mask for a short time or nasal oxygen overnight.
- The nurse monitors your vital signs, including your pulse and blood pressure.
- You will have pain medicine on a regular basis. Tell your nurse if you are in pain. You may have a pain button to give yourself medication.
- The stay in the recovery room is usually 1-3 hours.



After Surgery: The Surgical Unit

- Once you are medically stable, you are moved from the recovery room to the surgical unit.
- You may have an intravenous line (IV) for medicine.
- You may have a catheter inserted.
- You may have a drain in your leg to collect blood from your knee.
- You may have a compression style dressing around your knee.
- You may have compression devices placed on your lower legs.

Compression devices gently squeeze your calf muscle to help with blood clot prevention.
- You may have blood taken.
- You will be told how much weight you can put through your leg; this is your weight bearing status. This can vary for each person. It may be non-weight bearing, feather, partial, or weight bearing as tolerated.
- The nurse will regularly check your:
 - pain level and comfort level,
 - breathing, blood pressure, pulse and temperature,
 - sedation or level of sleepiness,
 - ability to feel or move your legs,
 - ability to pass urine,
 - drains and dressing,
 - blood sugars.
- If you have had a spinal anesthetic, tell your nurse if you notice:
 - extreme drowsiness,
 - nausea,
 - sudden, severe back pain,
 - itchy skin,
 - headache,
 - numbness in the feet or legs,
 - trouble moving the feet or legs,
 - or if family or visitors find that you are confused or too sleepy, they must tell the nurse.
- You will use a commode /urinal during the day and, when you are able, you will walk to the bathroom with assistance from the nurse or physiotherapist. Some people who have spinal anesthetic find it difficult to urinate and will need a catheter (a temporary tube placed in your bladder to empty it).
- You will start with sips of fluid and increase to a regular diet.
- You may be started on an anti-blood clotting medicine after surgery to help reduce your risk of developing a blood clot (see “Blood-thinner Medication after Surgery” on page 27 for more information).
- You are taught exercises to help reduce complications after surgery.

Day After Surgery

After Surgery: Bed Exercises

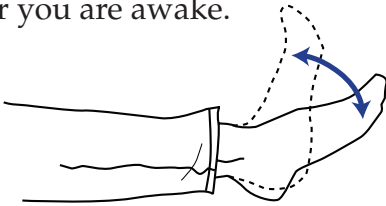
- Do not hold your breath while doing the exercises.

#1 Deep breathing and coughing

Take 10 deep breaths followed by 3 coughs every hour to keep your lungs clear.

#2 Ankle pumping

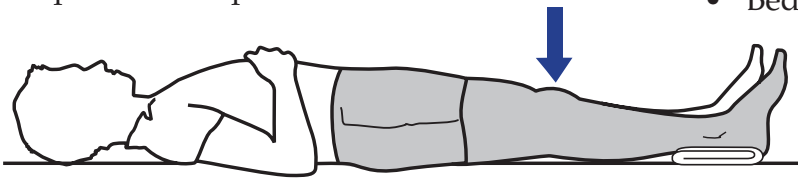
Pump ankles up and down to improve circulation in your legs 10 times every hour you are awake.



#3 Quad sets

Push operated knee down in to the bed. Hold for 10 seconds.

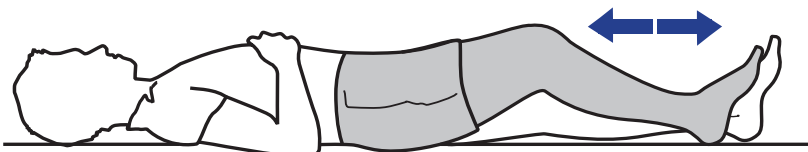
Repeat 2 times per hour.



#4 Knee Flexion

Slide your foot up along the bed and bend your knee and hip only a few inches off the bed. Slowly slide your foot down until the leg is straight again.

Repeat 2 times per hour.



- Nurse will check your drain, dressing, blood pressure, pulse, and temperature regularly.
- Blood tests will be done.
- You will have an x-ray on your operated knee.
- You will receive pain medications, antibiotics, stool softeners, and blood clot medication as needed.
- The catheter and drain may be removed today.
- You may eat a regular diet and continue drinking plenty of fluids.
- You will be assisted to the chair by a physiotherapist or nurse.
- You will know your weight bearing restrictions.
- Discharge plans are reviewed, including your outpatient physiotherapy plan.
- Bed exercises are reviewed

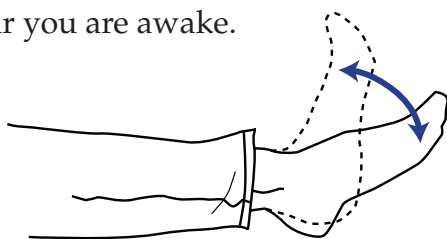
First Day after Surgery & Onward

Bed Exercise Program

- Do not hold your breath while doing the exercises.
- It is your responsibility to ensure that the exercises are done 3 times a day. Feel free to ask for help from therapy staff, family or nursing, if required.
- Continue deep breathing and coughing until you become more mobile.

#1 Ankle pumps

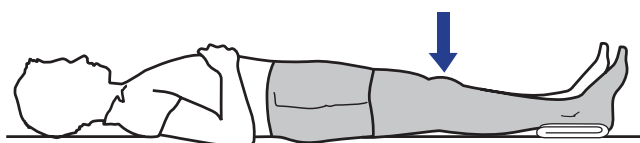
Pump ankles up and down to improve circulation in your legs 10 times every hour you are awake.



#2 Quad sets

Push the back of your knee down against the bed and tighten the muscle on the front of your thigh. Hold for 10 seconds and relax.

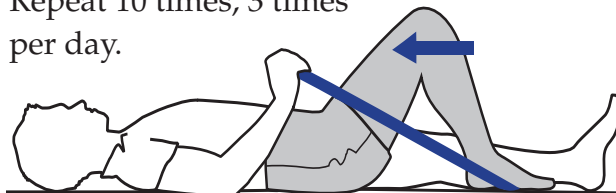
Repeat 10 times, 3 times per day.



#3 Knee flexion

Slide your foot up along the bed and bend your knee and hip. Slowly slide your foot down until the leg is straight again. You may use the cloth strap to help.

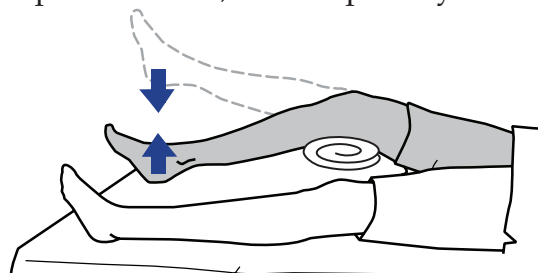
Repeat 10 times, 3 times per day.



#4 Knee over the roll

Place roll under operated knee. Keep knee pressed into roll and lift foot up to straighten leg. Hold for 5 seconds and slowly lower foot back to bed. Use strap to assist if needed.

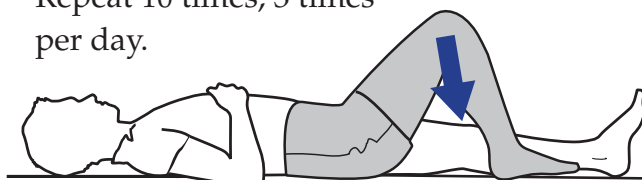
Repeat 10 times, 3 times per day.



#5 Hamstring Heel Push

With operated knee bent, push heel into bed without bending knee further. Hold for 5 seconds and relax. You may keep knee bent after each repetition.

Repeat 10 times, 3 times per day.



Day 2 After Surgery

- Nursing assessments continue but will become less frequent as you improve.
- Report bowel movements and urination to nurse.
- Blood tests will be done.
- Pain medication is reviewed and will continue to be given. Tell the nurse when you have pain with movement.
- Intravenous is discontinued.
- The drugs you take at home will be reviewed.
- Complete morning care routine independently with nursing assistance, if needed.
- Wound dressing will be changed.
- Continue with a regular diet and fluids.
- Sit in chair for all meals.
- Walk to bathroom.
- Final bed exercise will be reviewed.
- Final review of bed transfers under home conditions will be conducted.
- Increase walking distance with gait aid.
- Final review of stairs is applicable under home conditions.
- Final review of dressing and bathing if you need help will be conducted.
- Final discharge plans will be discussed with you and your family.
- Dress in street clothes to go home.

Length of Hospital Stay Guidelines

Your time in the hospital is for your acute needs. Your healthcare team will work with you to make sure you are medically stable and able to manage daily tasks, with help if needed, to go home. Before surgery, it is important to make arrangements to have someone pick you up from the hospital when going home. Discharge time is 10-11:00.

Be aware you may go home sooner than expected

Ensure your travel arrangements are flexible.

Physical Activity

Physical activity is a very important part of your recovery. Not only does it help to improve the function of your joint, but it also helps clear your lungs, reduces the risk of blood clots in your legs, reduces pain, gets your bowels moving and also decreases your risk of pressure ulcers or “bed sores”.

The Therapy staff will work with you throughout your stay to review and practice how to:

- do your daily exercises,
- walk with a walker and/or crutches,
- transfer in and out of bed under home conditions,
- use the stairs safely, if applicable.

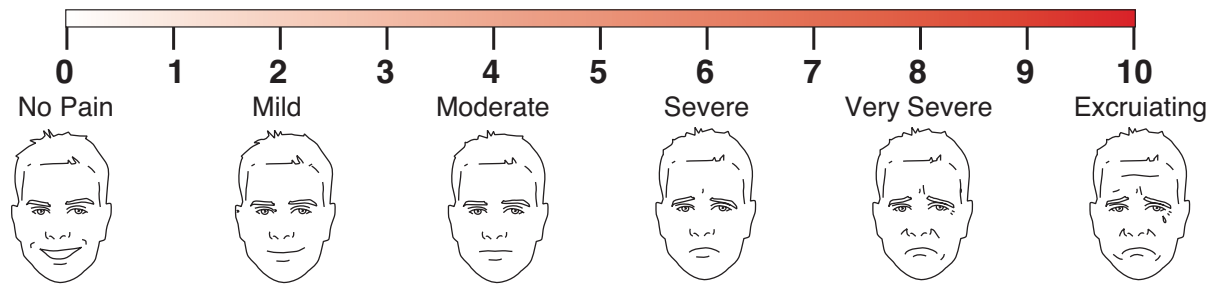
The Therapy staff will also:

- encourage you to continue your exercise program at home,
- review that you have an appointment with a physiotherapist in your local community,

Pain Control After Surgery

- Your nurse will teach you how to use the pain scale to describe your level of pain. “0” is no pain and “10” is the worst possible pain.
- Generally, pain medicine is given as a pill. A combination of medicines will likely be used to control your pain after surgery. This normally would include acetaminophen (e.g. Tylenol™) plus possibly an anti-inflammatory (e.g. NSAID) and/or narcotic (e.g. morphine). By taking a combination of these medicines, you may be able to reduce the side effects and have improved pain control. It is important to talk to your healthcare team to understand how and when to take these medicines.
- You may have a Patient Controlled Analgesia (PCA) pump. Analgesia means pain relief. Instead of ringing for your nurse when you need pain medicine, you will push the PCA button. You (and only you) may push the button to receive a small controlled amount of pain medication which is pumped into your IV tube.
- The doctor orders the right amount of medicine to control your pain. This allows the PCA to give you the exact dose without the risk of giving yourself too much.
- If you start to feel discomfort and want relief, just push and release the button. The pain medicine goes into the intravenous and into your blood. The medicine works in a few minutes.
- Some side effects of pain medicine can include nausea, headache, vomiting, drowsiness, itchiness, inability to urinate and/or constipation. Tell your nurse if you have any of these symptoms.

*It is our goal to keep your pain at “3-4” at rest
(may increase with exercise)*



Pain Control at Home

Most people have less and less pain over the next 6-12 weeks. If pain is preventing you from caring for yourself, sleeping and/or exercising, talk to your physiotherapist or doctor. **If your pain becomes increasingly worse or if you have pain in a new part of your body, seek medical attention immediately.**

Here are some ways to manage your pain:

- Take pain medicine as directed. It is normal to have some increased pain or symptoms during physical activity or physiotherapy sessions. It may be helpful to take the pain medicine 1 or 2 hours before doing these activities in the first weeks after surgery. It is better to take medicine BEFORE the pain is severe.
- Ice can reduce pain and inflammation. Place an ice pack wrapped in a towel on your knee for no more than 15-20 minutes after exercises.
- Pace yourself. Do not push yourself. Regular rest is an important part of your healing process.
- Relax. Use relaxation techniques such as breathing exercises or visualization.
- Distract yourself. Listen to music, visit friends, write letters, watch TV.
- Think positively. You will become more and more comfortable as you recover from your surgery.

Blood-thinner Medication after Surgery

After knee replacement surgery, you are at risk for developing a blood clot in your legs or lungs (see Complications, page 39). Patients go home with a prescription for a blood thinner medication. This blood thinner will either be a pill (Xaralto) or needle (Low Molecular Weight Heparin–LMWH). The hospital pharmacist checks to see which one is best for you. It is important you take your blood thinner as directed by your surgeon.

Here is some information about LMWH injections:

- Enoxaparin (also called Lovenox), Dalteparin (also called Fragmin) are some examples of LMWHs.
- LMWH is usually injected into the skin on your stomach using a very thin, short needle attached to a pre-filled syringe.
- LMWH injections are usually given once a day or twice a day for 2 weeks after surgery.
- Your nurses will teach you how to give yourself the injection before you are ready to go home.
- If you would rather not give yourself the injection, have a family member or friend come to the hospital to learn how to give the injection at the same time each day.
- Pharmacies attached to hospitals and pharmacies near large hospitals keep this LMWH in stock so be sure to fill your prescription before you go home. If you are planning on using your local pharmacy, be aware that it can take up to 2 days to get your LMWH injections in stock.
- If you have any questions about your blood thinner medication, make sure to ask your pharmacist.

Going Home

Most people are discharged home. Before leaving the hospital, plan appointments with the following people:

Follow-Up Medical Appointments

- The person (e.g. family doctor or surgeon) who will remove your staples, 14 days after surgery
- Your physiotherapist, usually within 3-5 days of discharge
- Your surgeon, usually around 4-6 weeks after surgery
- Your family doctor, once you are back on your feet, to review your general condition

After Surgery

In this section, you will learn about:



Everyday activity guidelines



Physiotherapy after hospital



Transportation



Grooming



Wound care



Sexual activity



Returning to work



Complications



Long term care of your knee



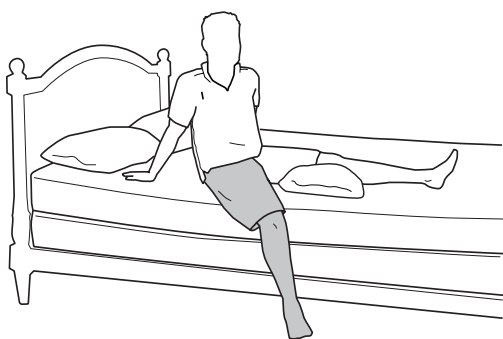
Resources

Everyday Activity Guidelines

Getting Out of Bed

You will initially be helped by a nurse or physiotherapist when moving.

- Move your body to the side of the bed that you normally use at home.
- Slide your legs over the edge of the bed while using your arms to push yourself to a sitting position.
- You may use your strap to assist your operated leg.
- Bring your body to a sitting position at the bedside.



Getting Into Bed

- Sit at the side of the bed that you normally use at home.
- Without using bed rails, slide back across the bed using your arms for support. Position your body, with your back pointing toward the top of the bed.
- Lift legs into bed. Use the strap for your operated leg if needed.

Sitting to Standing

- Sit on edge of the bed with your operated leg slightly ahead.
- Place your hands on the bed. Push up through your hands and non-operated leg and then reach for the walker.



Sitting Down

- Use a firm chair with armrests.
- Back up to the chair, bed or toilet until you feel the edge behind both your knees.
- Move your operated leg forward and reach back with your hands for the armrests.
- Slowly lower yourself into the chair.

Walking

You can expect to use walking aids, such as a walker, crutches or cane, for up to 4-6 weeks or longer after your operation, based on the guidance of your physiotherapist. By 4-6 weeks after surgery, you should be walking with more confidence, have more strength, and be able to walk longer distances. Regular physiotherapy will help you get the most out of your new joint, have a faster recovery, and will also reduce your risk of developing a blood clot.

WALKING FORWARD WITH WALKER

- Move the walker forward making sure all four legs are down.
- Move your operated leg forward into the walker.
- Put the correct amount of weight on your operated leg and push through your arms onto the walker as you step forward with your non-operated leg to be equal with operated leg.
- Repeat this to continue to walk forward.

WALKING FORWARD WITH CRUTCHES

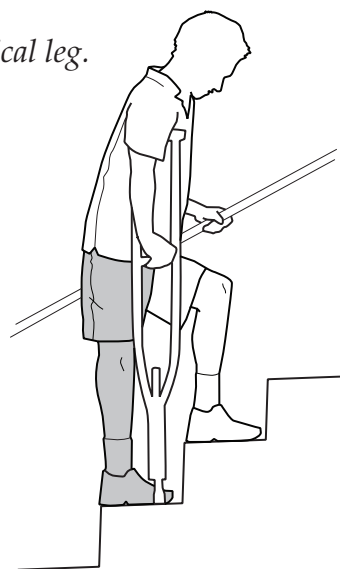
- Use the same pattern when using crutches. The weight goes through your hands and not your armpits when walking with crutches.
- The proper crutch height was provided for you at the pre-surgical screening clinic.

Stairs

The physiotherapist will determine whether you will use crutches or a cane on the stairs depending on your home. You will practice before leaving the hospital with the therapy staff so that you are able to manage stairs safely and independently.

REMEMBER: UP WITH THE GOOD, DOWN WITH THE BAD.

Shaded leg is the surgical leg.



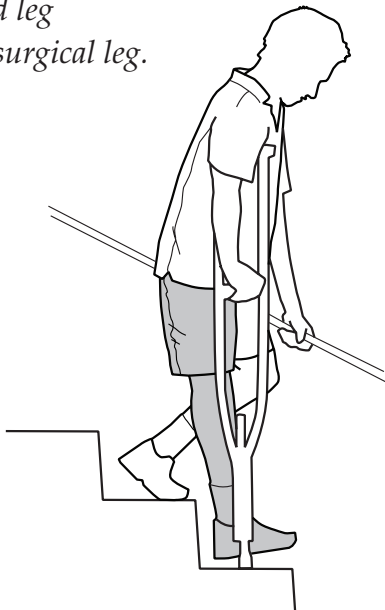
GOING UP STAIRS WITH ONE RAIL AND ONE CRUTCH/CANE

- Hold onto the rail, place the crutch/cane in the other hand.
- Put weight on the rail, crutch/cane and the bad leg.
- Step UP with your good leg on the step.
- Follow with your bad leg and crutch/cane, one stair at a time.

GOING DOWN STAIRS WITH ONE RAIL AND ONE CRUTCH/CANE

- Hold onto the rail, place the crutch/cane in the other hand.
- Place crutch/cane down onto the step.
- Put weight on the rail, crutch/ cane and the good leg.
- Step DOWN with your bad leg on the step.
- Follow with your good leg down onto the stair, one stair at a time.

*Shaded leg
is the surgical leg.*



GOING UP THE STAIRS WITH 2 CRUTCHES:

- Put weight on the bad leg and crutches, Step UP with your good leg on the step.
- Follow with your bad leg and crutches, one stair at a time.

GOING DOWN THE STAIRS WITH 2 CRUTCHES:

- Place your crutches on the step below.
- Step DOWN with your bad leg first.
- Put weight through the crutches and bad leg.
- Follow with your good leg, one stair at a time.

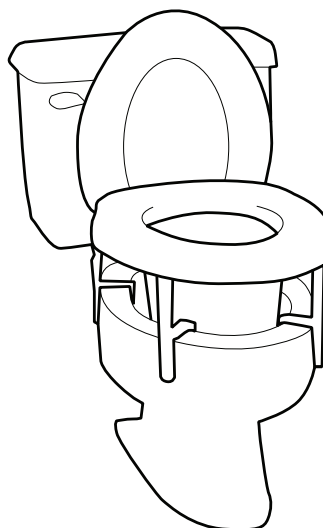
Getting Dressed

- Sit on a raised chair or bed.
- Dress your operated leg first and undress it last.
- Use adaptive aids like a long-handled reacher, sock aid and shoehorn to reach the foot of your operated leg and put on socks, pants, shoes, etc.
- If there is someone at home who can help you get dressed, you may not need to use these devices.



Using the Toilet

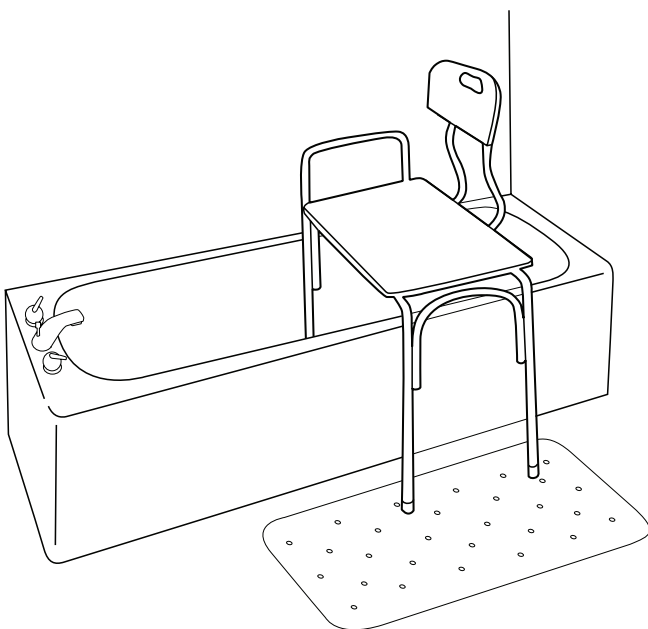
- Sit down as you would in a chair.
- Make sure that the toilet seat is secure or that you can use the counter to push yourself up. You can also install grab bars to help you stand or sit. Do NOT use towel racks or toilet paper holders to help you stand or sit down.
- Use a raised toilet seat or commode for the first 2 months after your surgery only if you have had a bilateral knee replacement as directed by your therapist”



Bathroom Safety

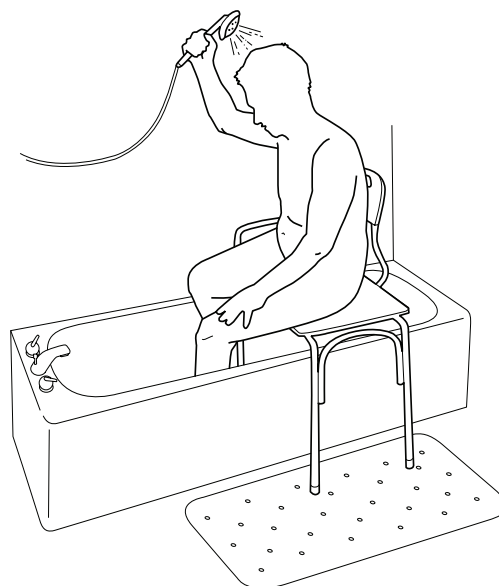
Falls can happen anywhere but are most likely in the bathroom. Here are ways to reduce the risk:

- Do not rush. Plan to use the toilet often. Have a bedside commode if needed.
- When bathing, use a bench or chair, non-slip bath mats, grab-bars.
- Make sure the path from your bedroom to the bathroom is well-lit.
- Wear sensible, non-slip shoes or slippers.



Bathtub Transfer

- Use a tub transfer bench with a hand-held shower (in a bathtub) or shower chair (in a shower stall) for the first 6 weeks after surgery. Do NOT sit on the bottom of the tub.
- Remove glass shower doors on your tub and replace with a shower curtain.
- Place a non-slip bathmat inside and outside the tub.
- If the ledge of the bathtub is tall, you may need bench leg extensions.
- Sit down as you would in a chair. Slide back as far as you can on the seat. Then lift your legs and slide to clear feet over the edge of the tub.
- Move your body down the bench by pushing up on the bench with your arms and lifting your bottom.
- Use long-handled aids to clean your feet and other hard-to-reach places.



Physiotherapy After Hospital

Continue the 5 bed exercises you were doing in the hospital, 3 times a day.

The hospital physiotherapist will confirm that you have arranged your physiotherapy appointment for when you get home. This appointment was discussed in the pre-surgical screening class.

Your physiotherapist will give you exercises to stretch and strengthen your legs and improve your walking and balance. As you recover, the exercises will change. Doing the exercises assigned by your physiotherapist will help you move your new joint and enjoy greater independence. It is important to continue with some form of exercise.

Talk to your physiotherapist if you have questions about your exercises or concerns about your progress.

Transportation

Driving

Driving is not allowed after knee surgery for the first 6 weeks regardless of which knee was operated on. There are a number of factors that can impact your ability to safely return to driving. These include using mobility aids and taking prescription pain medicines.

Talk to your surgeon before driving



There are many different ways to get around after surgery. Here are some options:

- friends/family,
- taxis,
- bus,
- community transit.

See “Resources” on page 43.

Getting Into and Out of Vehicles

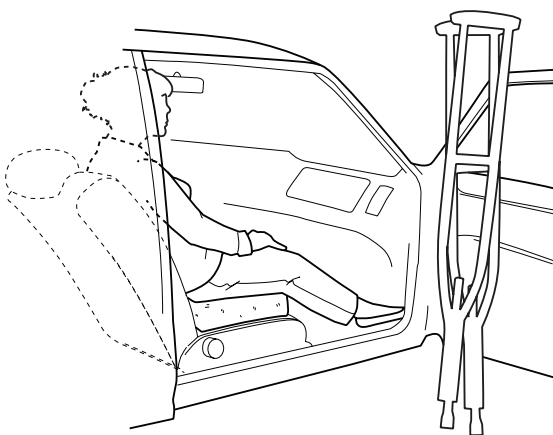
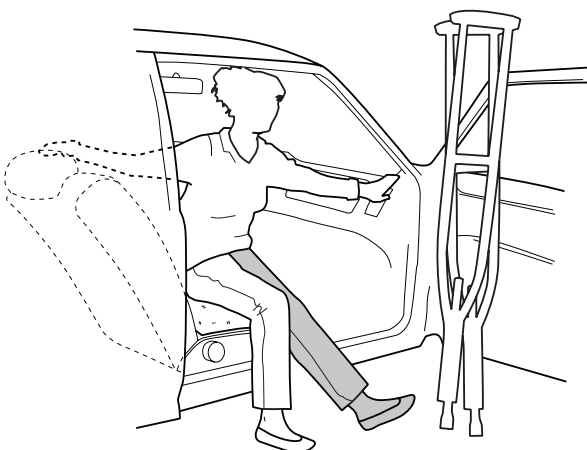
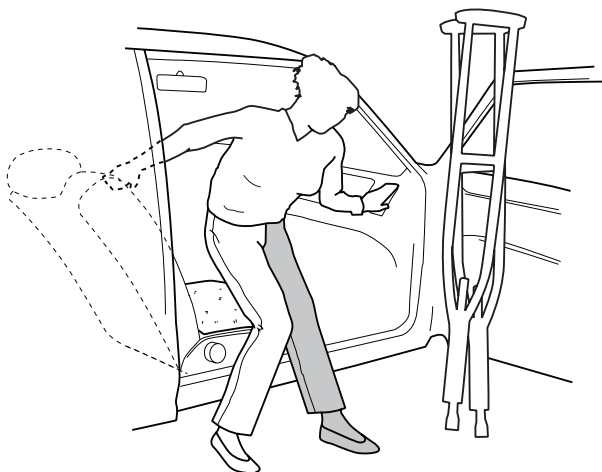
It can be challenging to get into some cars, particularly following surgery. Talk to your therapy staff if you have questions about car travel. Please practice these instructions before you come to the hospital.

Park close to the curb.

- Move the seat as far back as possible to provide maximum legroom.
- Recline the back of the seat.
- A piece of plastic or a large garbage bag over the cushion may help you to slide in more easily.
- Back up to the seat until you feel the back of the seat on your legs.
- Straighten your operated leg.
- Hold onto the back of the seat and the car to stabilize you.
- Lower yourself to the seat.
- Slide back and gently lift your legs into the car.

To get out of the vehicle, use the same steps, in the opposite order.

Shaded leg is the surgical leg.



Air Travel

You may have some extra challenges travelling by plane after surgery. Be sure to give yourself extra time when flying.

- Talk to your surgeon about when it is safe to fly after surgery. You will NOT need a special card indicating you have had a knee replacement. The new joint may set off metal detectors at the airport. You may need to show airport security your incision or you may be asked to take the full body scan to prove you've had surgery.
- While on the plane, do foot pumping exercises every hour to help reduce the risk of clots.
- When able, get up and walk around.

Grooming

- It may be difficult to bend over to cut your toenails. Look for professionals who can assist with this.
- To wash your hair, a caregiver may assist you by sitting in a chair with your back facing a sink. Lean your head back to allow them to wash your hair. Rinse- free shampoos are also available.

Wound Care

You will have a cut (incision) at the site of your surgery. Your nurse will teach you how to care for your incision at home. The edges of your skin are held together with staples, which are metal clips.

- A clean dressing will be put over the wound prior to leaving the hospital. If the dressing is dry after 2-3 days, it can be removed and not replaced. If you are more comfortable having the incision covered, you can replace the bandage. Bandages can be bought at the pharmacy.
- If your incision is draining, put on a clean bandage and replace it every 1-2 days. In this case you may receive some care from a nurse through the Community Care Access Centre.
- Remember to wash your hands before and after you care for your incision.
- You may shower after 5 days if the incision is dry, but do not soak your knee in water; for example no baths, no whirlpools for 6 weeks.
- Staples are to be removed 14 days from the date of your surgery (see “Follow-Up Medical Appointments” page 28).
- Do not apply any creams, ointments or lotions to your incision until you’ve been told to do so by your surgeon or physiotherapist.

Sexual Activity after Knee Replacement

- You may return to sexual activity when you feel ready and comfortable.
- Avoid prolonged or repetitive kneeling directly on the operated knee until advised by surgeon.
- You may need to consider trying some new positions. Talk to your partner.
- Consider other ways you can express intimacy such as hugging, holding hands and kissing.
- If you have questions or concerns about how to protect your new knee during sexual activity, talk to your occupational therapist, physiotherapist or surgeon.

Returning to Work

Allow yourself time to recover from surgery and focus on your rehabilitation before returning to work. Some people return to some form of work quickly after surgery but others need a longer time to heal and recover. This depends on health status and the type of work you do. Talk to your surgeon before planning on returning to work.

Complications

If you develop any of the following complications, call your surgeon's office and tell them what you are experiencing. If you are unable to contact your surgeon, go to the emergency department or call 911. Have them contact the orthopedic surgeon on-call prior to starting any antibiotic treatment.

Call 911 immediately if you have:

- shortness of breath,
- sudden chest pain,
- coughing up blood,

Seek medical advice immediately if you have:

- pain, aching, heat or redness in your thigh or calf area of either leg,
- increasing severe swelling in either leg or around incision,
- temperature above 38°C (101°F) taken at least 30 minutes after eating or drinking,
- increased drainage from the incision site, change in drainage (odour), redness, or opening of the incision edges,
- increased difficulty with walking.

Incision Infection

- The area around your incision is becoming red.
- New green, yellow or foul smelling pus drains from the wound site.
- There is increased pain or swelling of wound site and surrounding area.
- You have a fever above 38°C or 101°F.
- Call your surgeon if you think you have a possible wound infection.

Urinary Tract Infection

- You have pain when you urinate.
- You have frequent or urgent need to urinate.
- You have foul smelling urine.
- You have a fever above 38°C or 101°F.

Sore Throat/Chest Infection

- You have swollen neck glands, pain when you swallow.
- You have frequent cough, coughed-up yellow or green mucous, shortness of breath.
- You have a fever above 38°C or 101°F.

After surgery, a few people have complications and need more medical treatment. These complications include blood clots, pressure ulcers or “bed sores”, constipation/bladder function, swelling, joint infection, anemia (low blood count) and joint loosening.

Blood Clots

A small number of people may get blood clots after surgery. Blood clots usually develop in the deep veins in the legs.

You may be at greater risk if you:

- are overweight,
- smoke,
- have cancer,
- have poor mobility,
- have other medical conditions,
- become dehydrated,
- have reduced circulation

To reduce the risk of blood clots:

- Drink lots of fluids – stay hydrated.
- Give yourself your daily LMWH anti-blood clotting injections or oral pill (see page 27 for more information on LMWH if prescribed by your doctor).
- Walk short distances at least once an hour (except when you are sleeping).
- When you are sitting or in bed, pump your ankles and tighten your leg muscles.
- Stop smoking and keep a healthy weight.

Pressure Sores

Pressure ulcers or “bed sores” are skin wounds caused by repeated friction or shearing and staying in one place too long.

To prevent ulcers:

- Change your position frequently while in bed or chair.
- Get out of bed or chair often.
- Tell someone if you have pain/burning in heels, elbows or your bottom.

Constipation/Bladder Function

Constipation can be a problem after surgery. A change in your diet, less activity and pain medicine may make your constipation worse. Here are some ways to stay regular at the hospital and at home:

- Drink at least 8 glasses of water or low-calorie fluid a day.
- Eat fibre, such as prunes, bran, beans, lentils, fruits and vegetables.
- Move around as much as you can – do your exercises!

Your nurse may give you laxatives and/or stool softeners. You may need to keep taking these medicines at home. If you have constipation at home, talk to your family doctor or pharmacist. Constipation can be serious so do not ignore your symptoms.

Some patients have difficulty urinating after their joint surgery. Please talk to your nurse right away if you are having problems.

Swelling

It is normal and natural to have some swelling in your leg after surgery and during your recovery. Swelling may increase as you become more active but should decrease with time and will be less noticeable in the mornings.

To help reduce swelling:

- Pump ankles hourly when awake.
- Lie down flat and raise your legs by placing pillows under the length of your operated leg not directly under the knee.
- Change positions frequently and avoid sitting, standing and/or walking longer than 30 minutes at a time.
- Do short periods of activity. Walk a few steps. Rest and repeat.
- Place an ice pack wrapped in a towel on your knee for no more than 20 minutes repeated on/off throughout the day.

Joint Infection

An infection in the body can reach the new joint through the bloodstream. People who develop joint infections need antibiotics and, on rare occasions, further surgery.

To prevent infection or incision problems, it is important to keep the incision and dressings dry. Do not touch or pick at the incision and maintain good cleanliness of the surrounding skin.

Anemia (low blood count)

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,
- experiencing shortness of breath,
- having rapid pulse.

Joint Loosening

Over many years, the bond between the joint replacement and your bone may loosen. This can cause pain and make it difficult for you to move your artificial joint. To reduce the risk of this complication, avoid high-impact physical activities. If you notice increased pain in your artificial joint, talk to your doctor as soon as possible.

Long Term Care of Your Knee

- Do not lift anything heavier than 50 lbs. on a repeated basis.
- Talk to your dentist or surgeon before having any dental work done. You may need to take an antibiotic.
- There is no limit to walking, biking or swimming.
- Some activities, such as running and contact sports, are not recommended after you have had a knee replacement. If you have questions or concerns, please speak to your surgeon.

*We hope you found the information in this booklet useful.
We wish you a speedy recovery and many happy years with your new joint.*

Resources *Current as of January 2017*

GBHS Hospital Information

www.gbhs.on.ca

Arthritis & Surgery Information

OASIS Program; "Osteoarthritis Service
Integration System" Vancouver Coastal
Health "Manage your OA"

oasis.vch.ca

Email: oasis@vch.ca

604-244-5377

The Arthritis Society

www.arthritis.ca

Email: info@arthritis.ca

Arthritis Answers Line: 1-800-321-1433

Canadian Orthopedic Association

www.coa-aco.org

Canadian Orthopedic Foundation

whenithurtstomove.org

American Academy of Orthopaedic
Surgeons

<http://orthoinfo.aaos.org>

Equipment

Veterans Affairs Canada

www.vac-acc.gc.ca

Toll Free: 1-866-522-2122

Red Cross

www.redcross.ca

Toll free: 1-800-418-1111

Health Professionals

Dietitians of Canada

www.dietitians.ca

EatRight Ontario

www.eatrightontario.ca

Toll free: 1-877-510-5102

Ontario Physiotherapy Association (OPA)

www.opa.on.ca

TeleHealth Ontario

Free access to a Registered Nurse

Toll Free: 1-866-797-0000

Home Safety

Accessible and adaptable homes

Programs and financial assistance

www.cmhc-schl.gc.ca

Toll Free: 1-866-389-1742

Transportation & Services

Beaver Valley Outreach (BVO)

www.bvo.ca

519-599-2577

Georgian HandiVan - *Must be resident of
Municipality of Meaford*

519-538-5577

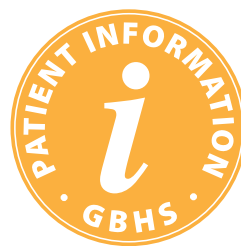
Home & Community Support

Services of Grey-Bruce

www.hcss-gb.ca 1-800-267-3798

Saugeen Mobility and Regional Transit
(SMART) www.saugeenmobility.ca

Toll free: 1-866-981-2504



Before, During & After Knee Replacement Surgery

September, 2018

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