

North Bay Regional  
Health Centre



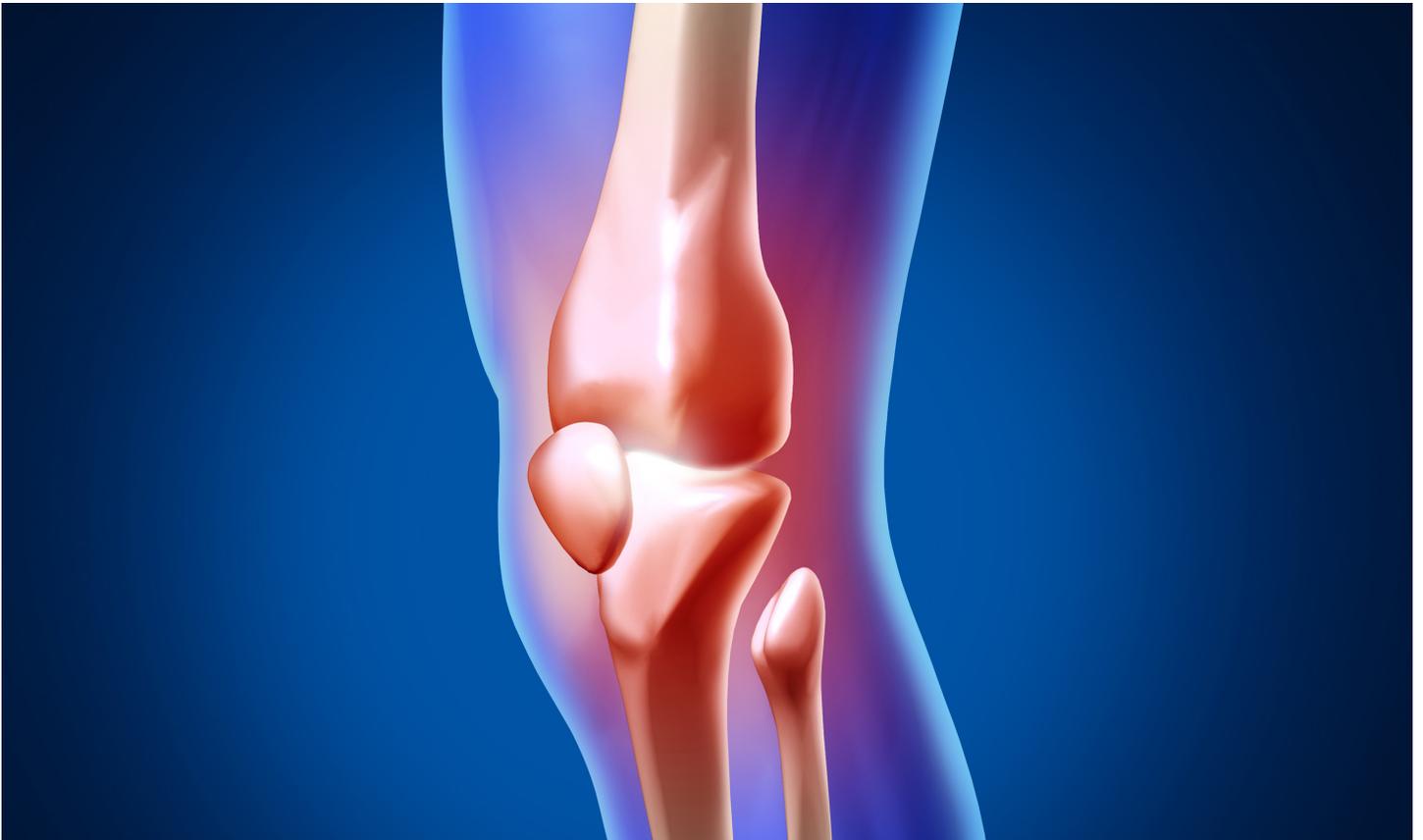
Centre régional  
de santé de North Bay

NEJAC | CÉANE

NORTH EAST  
JOINT  
ASSESSMENT  
CENTRE

CENTRE  
D'ÉVALUATION  
DES ARTICULATIONS  
DU NORD-EST

## YOUR GUIDE TO TOTAL KNEE REPLACEMENT



Disponible en Français

50 College Drive, P.O. Box/C.P. 2500, North Bay, Ontario P1B 5A4

Phone | Tél. 705 474-8600

[www.nbrhc.on.ca](http://www.nbrhc.on.ca)



## WELCOME

Thank you for choosing the North Bay Regional Health Centre. This booklet was written especially for you, the patient, and your family. It contains information about what you can do before, during, and after your surgery so that your joint replacement is as successful as possible. We have attempted to answer the most commonly asked questions about your upcoming surgery in this booklet. Please feel free to ask your surgeon, nurse, or therapist any other questions you may have.

Preparing for knee replacement surgery begins several weeks ahead of the actual surgery date. Please review this information and bring this booklet with you to your Pre-Admission Clinic appointment, the Pre-Operative Education class, and when you come to the hospital for your surgery.

For more information about the North Bay Regional Health Centre and the services available, a patient services directory is available for free at the front entrance lobby of the hospital. Ensure to pick one up when you come for your Pre-Admission Clinic visit and take the time to review the information in this directory.

## ACKNOWLEDGMENTS

Parts of this document have been reproduced with permission from:

- *OASIS (Osteoarthritis Service Integration System) at Vancouver Coastal Health: Before, During and After Hip and Knee Replacement Surgery: A Patient's Guide (2011)*
  - *Sunnybrook Holland & Arthritic Centre: A Guide for Patients Having Hip or Knee Replacement (2007)*
  - *Grey Bruce Health Network: Patient Education Booklet (2007)*
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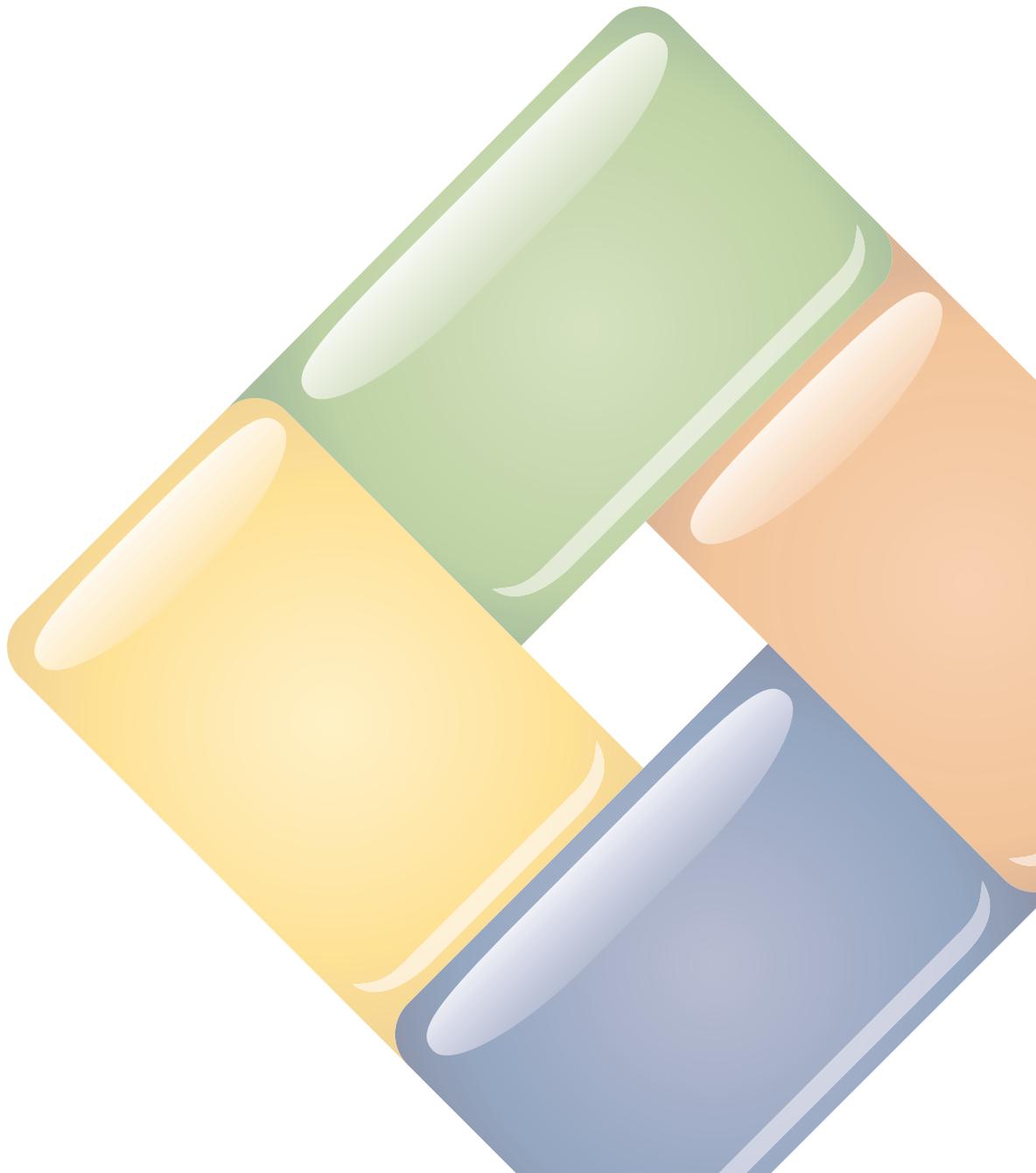
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### Resources

# INTRODUCTION

## **In this section, you will learn about:**

- Frequently Asked Questions
- Parking
- Infection Control and Hand Washing



## FREQUENTLY ASKED QUESTIONS

### How long will my surgery take?

The surgery takes about 1 ½ - 2 hours from the time you enter the operating room to the time you are moved to the Post Anesthetic Care Unit (PACU), also known as the recovery room.

### How much weight can I put on my leg after surgery?

You can put as much weight as you can tolerate on your operated leg unless told otherwise by your surgeon.

### Will I have pain after my surgery?

You will have pain after your surgery, but each person's pain is different. Options for managing your pain are discussed in this booklet.

### When will I be getting up after my surgery?

You will be expected to get up (with help) the same day of the surgery or the day after. The physiotherapist will show you how to use a walker or crutches. Later in your recovery, you may require the use of a cane.

Please bring shoes with good support to the hospital (e.g. slip-on shoes). If possible please bring a light, knee-length housecoat that opens all the way down the front. You will need these when you start walking after your surgery.

### Will I always need a cane?

Once fully recovered, most patients will walk without a cane. It will depend on your general health and strength.

### How long will I be in hospital?

Your time in hospital is **short**. Your health care team will work with you to make sure you are medically stable and able to get around safely before you go home. It is important to make arrangements to have someone pick you up from the hospital when it is time to go home. Ensure that your travel arrangements are flexible because you may go home sooner than expected. Discharge time from hospital is 11:00.

### Will I need medication to prevent blood clots?

Yes, you will be given a medication called an anticoagulant also known as a blood thinner. Forming blood clots is a defence that the body uses during and after surgery. Blood clots form when tissues are damaged and when there are changes with normal blood flow (when you are less active). Your doctor wants to reduce the risk of clots as much as possible.

If your doctor orders the medication in a pill form, there may be a cost to you. If you do not have a drug plan, please tell your doctor. Some of these medications are covered through the Ontario Drug Benefit program at no cost to you.

### Do I have to give myself a needle injection ("shot")?

You will need to give yourself an injection if your doctor orders a blood thinner given by needle. You (or a family member) will be taught how to do this while you are in the hospital. Once you go home, you will be expected to give yourself an injection once a day.

### When should I stop shaving my legs?

Do not shave your leg for 7 days before your surgery. Any small cuts or nicks in your skin can increase your chance of getting an infection. If these instructions are not followed, your surgery may be cancelled.

### Will I have any follow-up appointments after I go home?

You will **be expected** to go to physiotherapy (physio) for about 6 weeks after you go home.

- If you will be attending physio at the North Bay Regional Health Centre, the hospital's physiotherapist will arrange this for you.
- If you will be attending physio at a hospital other than North Bay, a referral will be faxed to the hospital at your Pre-Admission Clinic visit. Before your surgery, you should call the physio department to confirm your appointment date and time.
- If you will be attending a private clinic, a copy of the referral (original will stay on your chart) will be given to you during your Pre-Admission Clinic visit. You will need to arrange this appointment yourself by contacting the physio clinic of your choice.

About two weeks after your surgery, you will have a follow-up appointment with your surgeon. The appointment date and time will be given to you before you leave the hospital. You will have your staples or stitches removed at this appointment.

Please talk to your family and friends to make sure that someone will be able to take you to these appointments.

### **When should I call my doctor?**

You should call your doctor if:

- you develop a fever (over 38°C)
- your knee is suddenly very painful
- you have pain in your calf or chest, or
- your incision (operation cut) is red, swollen or draining

### **Can I get help at home?**

If you have any concerns about going home after your surgery, you can discuss your needs with one of our social workers. This can be arranged by the Pre-Admission Clinic nurse. It is important to have everything in place before your surgery.

### **When can I take a shower or bath?**

You can take a shower after your staples/stitches are removed. You might find using a bath chair or bath transfer bench helpful. You will be taught how to do this in the hospital. You can sponge bathe in the meantime, making sure your incision stays dry.

**NO tub baths /swimming pools / hot tubs** until your incision is completely healed. It is advisable to check with your surgeon or physiotherapist before attempting to do this.

### **Can I take part in physical activity after my total knee replacement?**

When you start leisure activities again following your knee surgery depends on the type of activity and your stage of recovery. Your surgeon and physiotherapist will discuss this with you throughout your recovery. Check with your surgeon before doing any new sport or new physical activity.

### **Should I limit sexual activity?**

Sexual activity may be resumed 8 weeks after your surgery. It is best to check with your surgeon to find out how long he recommends. Consider other ways to express intimacy such as hugging, holding hands, kissing and/or touching.

### **When can I go back to work?**

Your surgeon will tell you when you can go back to work. The timing can range anywhere from 6 weeks to 3 months, depending on your recovery and the type of work you do.

### **When can I start to drive my car?**

You may **not** drive any vehicle for **6** weeks after surgery, regardless of which knee was operated on.

### **Where can I get a Northern Travel Grant Application?**

Northern Travel Grant application forms are available from your surgeon's office or from Patient Registration during your Pre-Admission Clinic visit. If you are eligible and require a form, please ask for one.

### **What should I do if I am not feeling well before my surgery?**

Call your surgeon immediately if you develop a cold or your health changes in ANY way as you get closer to your surgery date.

## PARKING INFORMATION

### Daily Parking:

The parking fee is \$6 daily or \$3 per hour (up to daily maximum). You may also select “Day Pass” from the Pay Station, which allows for multiples visits on any given day. Patients and visitors can park in lots 2 and 5.

”Pay on Foot” Visitors take a ticket upon entering the parking lot, and then validate the ticket and pay for parking at one of the pay stations prior to exiting the building.

Pay stations are located in the:

- Central Lobby, east end
- Central entrance by the Cafeteria and
- Town Square, west end

### It's as easy as 1 2 3 4!

- 1) Approach the parking gate and take a ticket. The gate will open and you will be able to enter the parking lot. Bring this ticket into hospital with you.
- 2) Before you can exit the parking lot, you will need to take your parking ticket to one of the pay stations.
- 3) At the pay station, insert your parking ticket and pay the amount shown on the screen. Pay stations will accept coins, bills and credit cards. If the use of a debit card is needed, bank machines are located in the Central Lobby between the pay stations, in the Cafeteria, and in the Town Square.
- 4) Take your paid parking ticket back to your car, drive to the exit gate, and insert the paid ticket in order to lift the gates. You can also pay for your parking at the exit gate with a credit card. The amount owing will automatically be charged to your credit card.

### Chronic Care Pass:

For more frequent visits associated with treatment for a chronic condition, or if you are routinely visiting a chronic care patient, we recommend the purchase of a Chronic Care Pass. These passes can be purchased from the cashier located by Switchboard at the east end of the building.

## GUIDE TO INFECTION CONTROL AND HAND WASHING

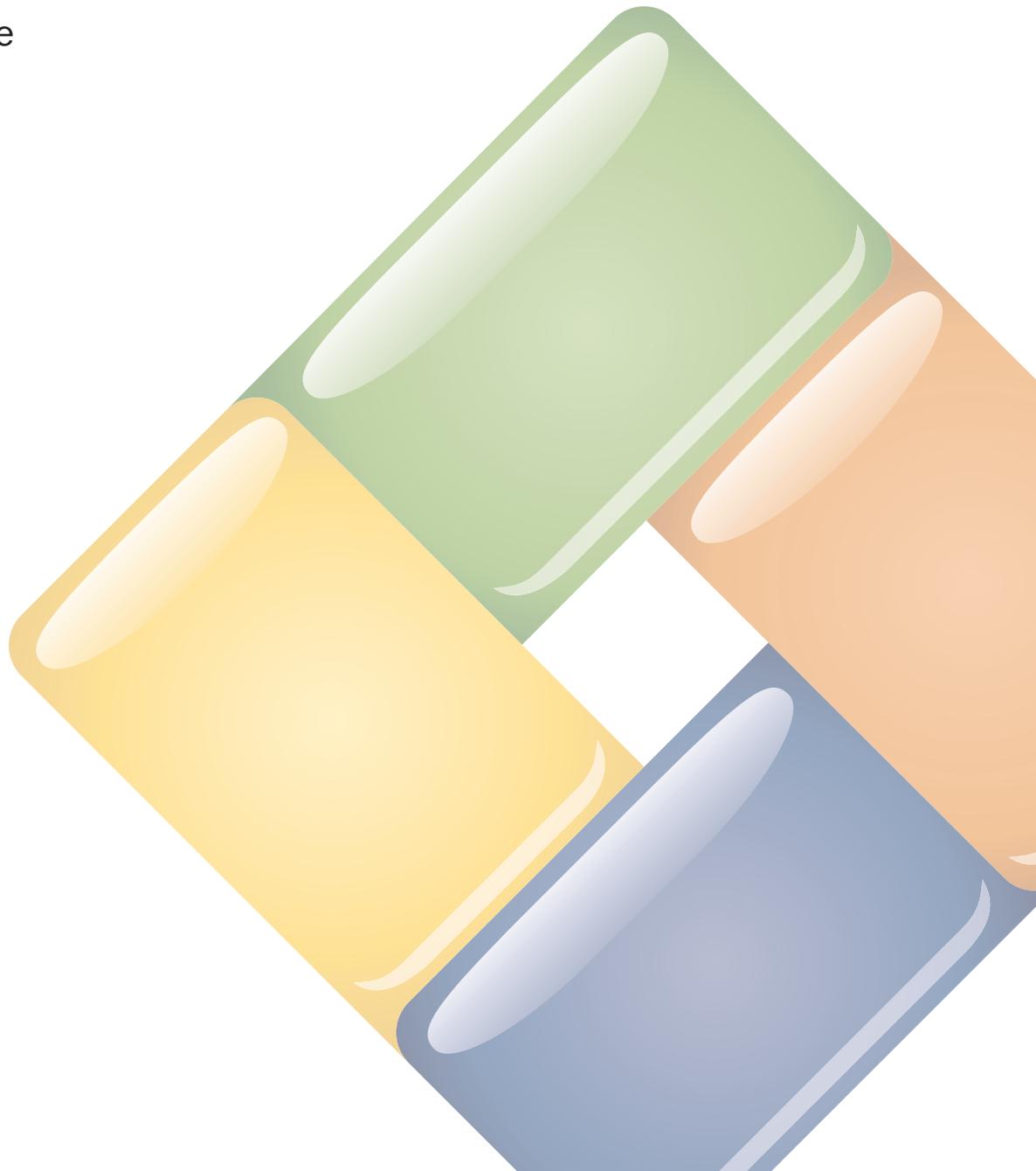
Families and visitors should not enter the hospital if ill (fever, cold symptoms, vomiting, diarrhea, cough, sore throat, etc.). Annual flu vaccines are recommended for yourself, families, and visitors.

Hand washing is a simple and good way to prevent the spread of infection from person to person.

ALL persons (patients, families, visitors) entering the North Bay Regional Health Centre should clean their hands with the alcohol-based hand rub found in the front lobby and outside each patient room. This should be rubbed on all surfaces of both hands, paying special attention to fingertips, thumbs and between the fingers. Please use this hand rub on your hands when entering the hospital and before entering patient room, and again when leaving both the patient room and the hospital.

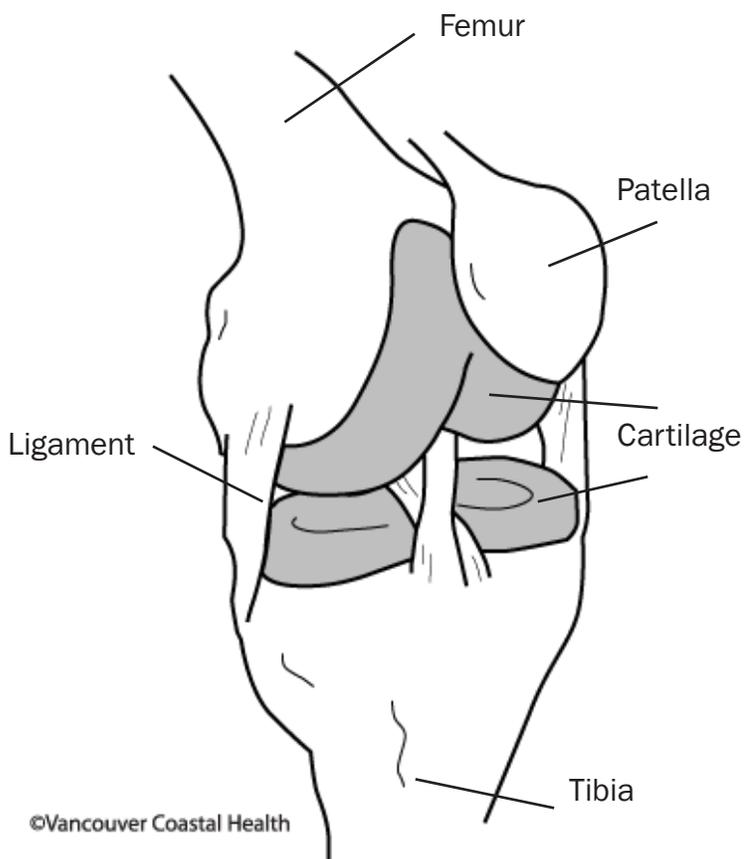
## **In this section, you will learn about:**

- Knee Anatomy
- Knee Disease
- Total Knee Replacement
- Revision Knee



## 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.
- Your knee cap (patella) is at the front of your knee.

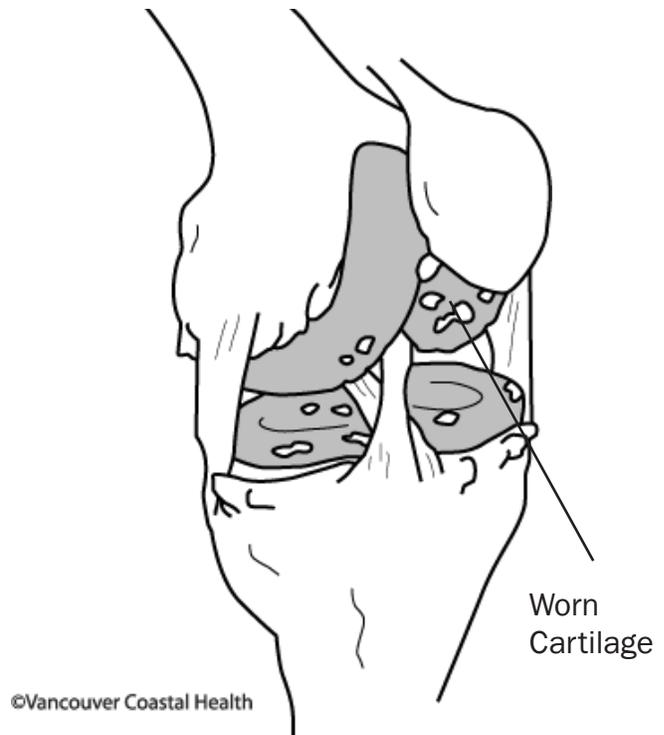


**Normal Knee Joint**

## KNEE DISEASE

The most common reason for having a joint replacement is osteoarthritis (arthritis of the knee). Osteoarthritis results in the breakdown of cartilage on the ends of the bones. It usually appears in the joints that carry your body weight, such as hip and knees. Osteoarthritis can cause joint pain and stiffness.

Other disease conditions may also damage the joint, requiring joint replacement surgery. These include rheumatoid arthritis or an injury to the joint. Talk to your doctor if you have questions about your joint health.

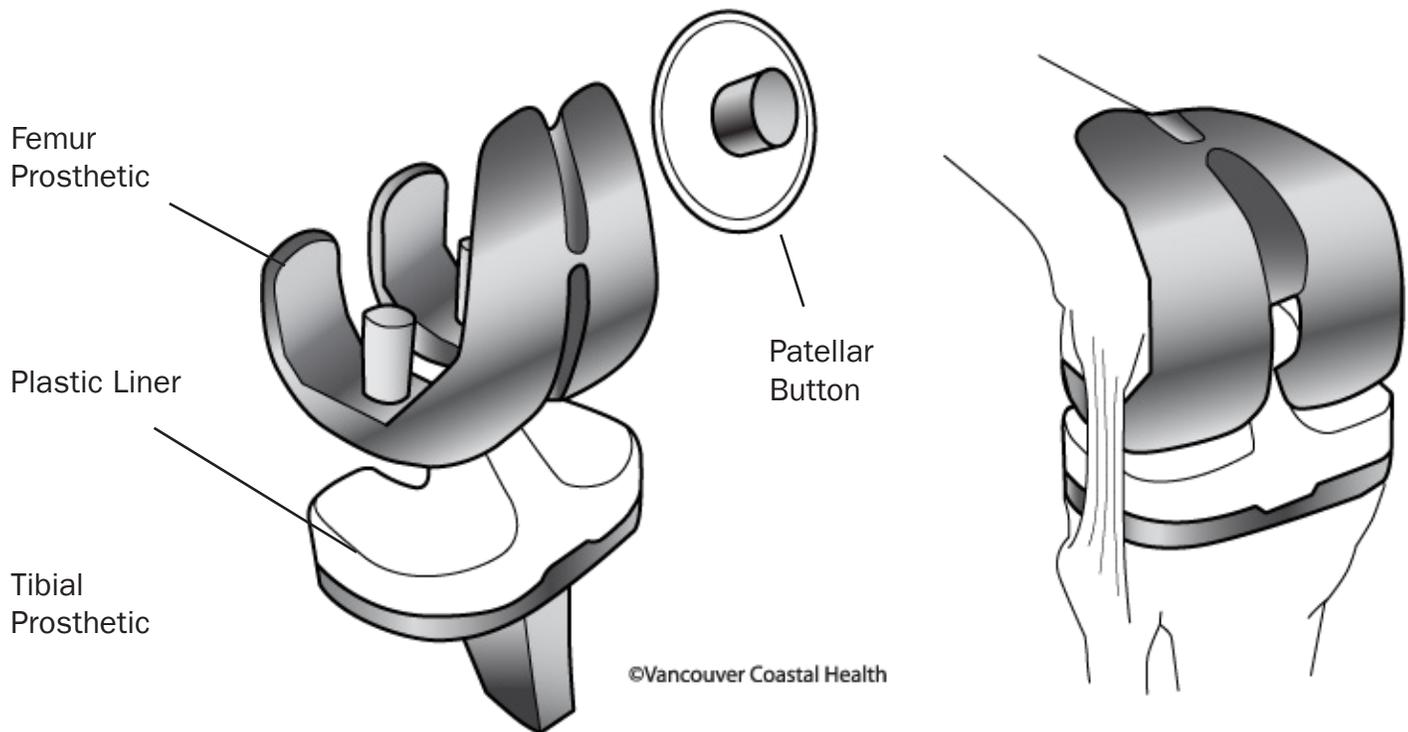


**Osteoarthritic Knee Joint**

## Artificial 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 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 (patella) is damaged, it may also be lined with a plastic disc. Once the new joint is in place, the muscles are repaired. Your skin is closed with sutures or staples (staples are metal clips that hold your skin together while the incision heals). This surgery takes about 2 hours.



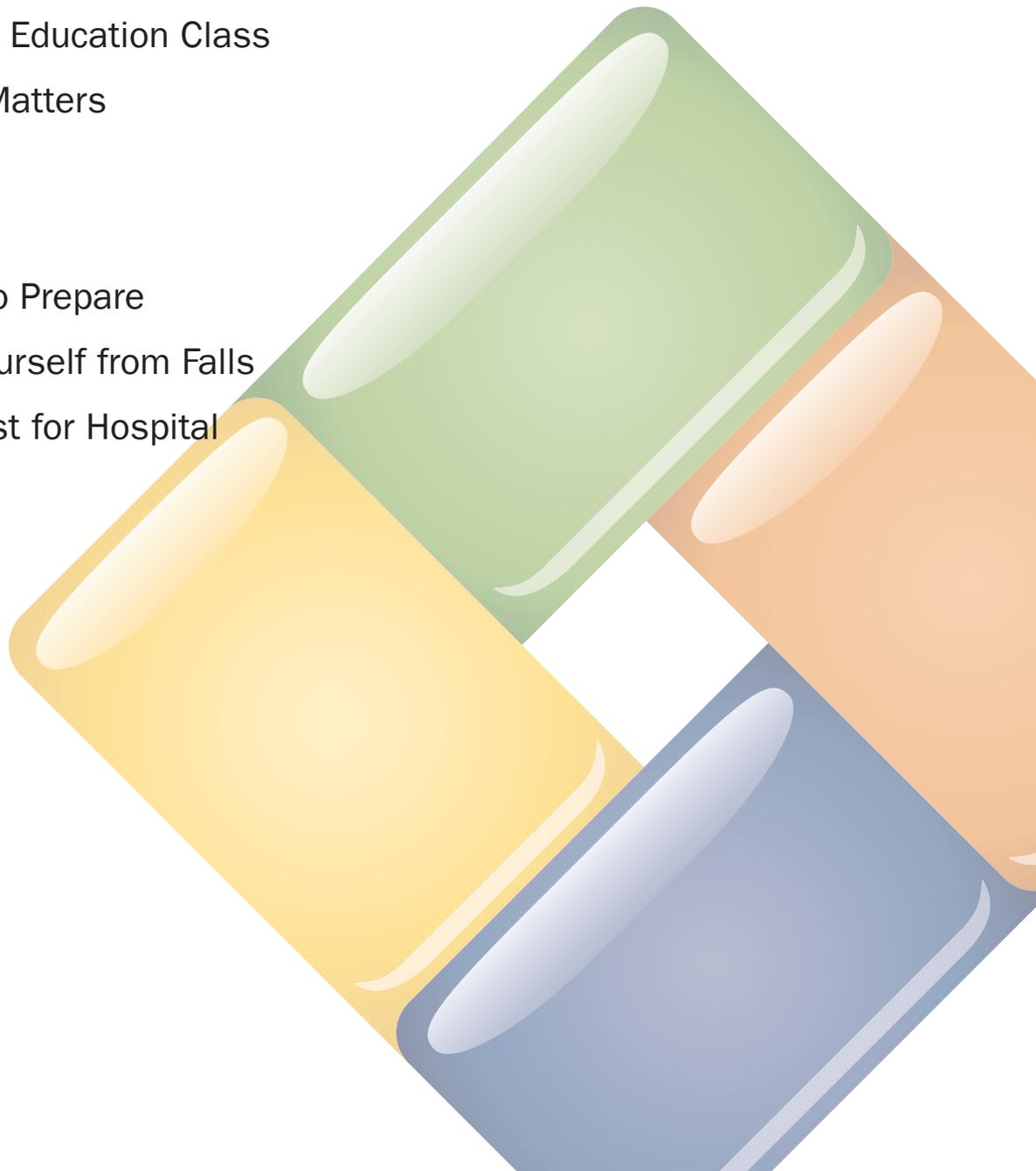
### KNEE REVISION

Some people who have had a knee replacement need another surgery. This can be because your new joint is loose or worn out, or because you had bone loss or an infection in the joint. These surgeries can be more complex and you may need more rehabilitation.

## BEFORE SURGERY

### **In this section, you will learn about:**

- Planning before Your Surgery
- Pre-Admission Clinic
- Blood Conservation Clinic
- Pre-Operative Education Class
- Your Health Matters
- Exercises
- Home set up
- Other Ways to Prepare
- Protecting Yourself from Falls
- Final Checklist for Hospital



## PLANNING BEFORE YOUR SURGERY

Planning to go home from the hospital starts before you have your surgery. Your time in hospital is short. Most people are discharged from the hospital 3-4 days after surgery, depending on your medical condition and your ability to move around.

Before you come to the hospital, it is important that you discuss your surgery with your family and friends, and explain how they can help you. Consider having a family member or friend act as your support person. This support person would help you before, during, and after your hospital stay.

Your support person should:

- Attend the Pre-Operative Education class with you
- Help you plan for your admission to hospital
- Help you prepare for discharge home
- Be a “second set of ears” to help remember instructions
- Come with you to the hospital on the day of surgery
- Be available when you are discharged home to help you settle in, and remind you of all your instructions.

### REMEMBER

your support person is there to help you, not take over for you!

### Go to your Pharmacy

If you live in Ontario and are on 3 or more prescription medications, make an appointment with your pharmacist to have a MedsChek done before your Pre-Admission Clinic appointment. Bring this list with you to your Pre-Admission Clinic appointment.

## PRE-ADMISSION CLINIC VISIT

The Hospital Pre-Admission Clinic appointment is an important part of your operation education and preparation for surgery. The Pre-Admission Clinic visit is designed to assess your overall health, provide information about your hospital stay, and help you prepare for your surgery. At this visit, you get all tests that your surgeon has ordered done, including an ECG, blood tests, and x-rays. You will also see a nurse, and you may see the blood conservation nurse, and possibly an anesthetist. The Pre-Admission Clinic is located on the 2<sup>nd</sup> floor (east main entrance) at the North Bay Regional Health Centre.

**Please report to the Pre-Admission Clinic to register for your tests and for your visit to the Pre-Admission Clinic.**

During the Pre-Admission Clinic visit, a nurse will:

- Review your health history and your medications.
- Inform you about what to expect during your hospital stay and post-surgical care.
- Review the Pre-Anesthetic Questionnaire you completed as part of your package given to you by your surgeon/office staff.
- Remind you that if you have infected teeth, cuts, rashes or any signs of infection, it is important that you notify your surgeon as soon as possible before the day of your surgery. Your surgeon will want to assess these conditions.
- Give you written instructions about when to stop eating and drinking the night before your surgery.
- Give you instructions for skin care before your knee surgery. Your surgeon recommends washing with a special soap to reduce the amount of bacteria on your skin prior to your surgery.
- Answer any questions that you have.

Be prepared to be at the hospital for most of the day, as tests are often done in the morning and the Pre-Admission Clinic visit is in the afternoon.



## PRE-OPERATIVE EDUCATION CLASS

You should plan to attend this one-hour education session to help you prepare for your total knee replacement surgery. Research shows that people who prepare for surgery and take part in their own care have a smoother, faster recovery after surgery. We encourage you to bring a family member or friend with you to the class.

You will also have the opportunity to ask questions.

A physiotherapist and an occupational therapist teach the pre-operative education class. Topics will include:

- How a knee replacement is done
- What to bring to the hospital
- What you can do at home prior to the surgery
- Goals of therapy and expected time frames for recovery
- Exercises for your knee after your surgery
- How to access physiotherapy after you leave the hospital

If you live out of town, you can participate in the class through the Ontario Telemedicine Network (videoconferencing).

**Classes: Every other Thursday**

**Time: 2:30 to 3:30**

**Location: E2 Conference Room**

For more information or to reserve a spot in the class, please call:

**North East Joint Assessment Centre**

(705) 474-8600 ext. 4858

## YOUR HEALTH MATTERS

### Eat Well

- Eating well before and after surgery will promote recovery and healing
- Maintain a healthy body weight to reduce the stress on your arthritic joint. One pound of extra body weight is equal to four pounds of stress on your joint
- For more information on healthy eating, visit:  
[www.eatrightontario.ca](http://www.eatrightontario.ca)  
[www.dietitians.ca/eatwell](http://www.dietitians.ca/eatwell)  
<http://www.hc-sc.gc.ca/fn-an/index-eng.php>
- For additional information on healthy eating and to talk to a Registered Dietitian for free, contact EatRight Ontario at 1-877-510-5102

### Stop Smoking Before Your Surgery

The most important thing you can do to prepare for your surgery is to stop smoking.

- People who smoke have a greater risk of developing heart and lung complications during and after their surgery.
- Smoking interferes with our body's ability to heal, and increases the risk of developing infections.
- Stopping smoking will reduce your risks, and help you recover faster.
- Get some help to stop smoking:
  - o Talk to your health care provider or pharmacist about ways to help you stop smoking
  - o Ask your nurse at your Pre-Admission Clinic visit for more information
  - o Contact Smoker's Helpline at 1-877-513-5333
- North Bay Regional Health Centre is a smoke-free environment. This includes the outdoor property. Preparing for this before surgery will help you during your hospital stay.

## Stay Active

Exercising before surgery will help you have a faster and easier recovery. Do activities that put less stress on your joint. Try activities like:

- Water-based exercises such as swimming or water walking in a community pool
- Cycling
- Pole walking
- Gentle stretching and strengthening
- 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.

Exercises before surgery will also help you to build your confidence and knowledge of how to exercise after your surgery. After surgery, daily exercises will be part of your rehabilitation for many months.

When you exercise, follow the **2-hour** pain rule:

- If your joint hurts for longer than 2 hours after you walk or exercise, you have probably exercised too much or too quickly.
- Decrease the repetitions of the exercises or how long you do the activity

**Talk to your family physician about your exercise plans if you have:**

- **A heart condition**
- **Chest pain**
- **High blood pressure**
- **Poor balance or dizziness**
- **Not been regularly active**
- **Any questions**

## EXERCISES

You will receive an exercise booklet in the hospital with more exercises to do after your surgery



Move both ankles up and down 10 times in each direction.



Bend your knee by sliding your heel towards your buttocks, keeping your knee pointing up towards the ceiling. Hold for 5 seconds. Repeat 10 times.



Place a roll under your knee and try to raise your heel off the bed until your leg is straight. Hold for 5 seconds. Repeat 10 times.



Tighten muscles in front of your thigh by pushing the back of your knee into the bed. Keep your toes pointed upwards. Hold for 5 seconds. Repeat 10 times.



Supporting your thigh behind your knee, slowly straighten knee. You can also place a towel around your heel to support your leg and then slowly straighten your leg towards the ceiling. You should feel a stretch in the back of your thigh. Hold 30-45 seconds. Repeat 3 times.



Sit with hands on the arms of a chair. Push down on hands to lift buttocks off chair. Repeat 10 times.

## HOME SET-UP

- Arrange or remove furniture so that you have a clear path around your home wide enough for your walker – at least 30 inches or 76 centimetres.
- Remove scatter mats and area rugs. Tape down the edges of larger rugs so you won't trip over them. Ensure extension cords and telephone cords are out of the way.
- Keep rooms and hallways clear and well-lit. Use night lights, especially between your bedroom, bathroom, and hallway.
- During recovery, you should only sit in armchairs – that's because you'll need the arms to help you sit down and stand up. Make sure you have at least one chair with a firm seat (not too low), a firm backrest and sturdy arms. Avoid chairs that recline, rock, roll or glide.
- If you have stairs, try to have railings put on before leaving the hospital or plan to get by without using stairs for a few weeks after your surgery. Take your time when going up and down the stairs. Be sure that stairways are well lit and free of clutter.
- If your bathroom is on a different level of your home than your bedroom, you may want to consider borrowing or purchasing a commode for use at night.
- Consider buying or borrowing a cordless phone. You can carry it around the house in the pocket of an apron, in a fanny pack or in a walker basket. That way you can answer the telephone no matter where you are and call for help if it's needed. Never rush to answer the telephone. Ask friends/family to allow the phone to ring many times, allowing you time to answer. Keep emergency numbers in large print near each phone.

## OTHER WAYS TO PREPARE

- Freeze extra meals ahead of time and ensure they are placed in an easy-to-reach spot.
- Arrange with family or friends to shop, do laundry, help with basic housework, and drive you to your medical or therapy appointments.
- If you live alone, you may want to consider alternate living arrangements right after your surgery, such as:
  - Going to stay with family or friends
  - Having someone stay with you or
  - Arranging to stay in a retirement home or lodge
- Practice all of the **exercises** so that you know them before your surgery. This will make it easier for you to do them after the surgery (they are found in this booklet on page 13).
- Practice getting in and out of bed pretending that you have had your surgery (you will not be able to lift your operated leg very well).
- Practice walking with your crutches or walker.
- Tell your dentist that you will be having an operation. If you need dental work, including cleaning, tooth extractions and periodontal work, schedule it well before your surgery date. Don't schedule any dental work, including routine cleanings, for several weeks after your surgery.
- Consider getting any foot care you require (e.g. podiatrist, pedicure) prior to your surgery, as it is strongly discouraged for at least 6 months after your surgery to prevent any possible post-operative infection.

## PROTECTING YOURSELF FROM FALLS

Osteoarthritis of the knee can increase your risk of falls. There are a number of things you can do to decrease this risk before and after your joint replacement surgery. Consider these practical suggestions:

- In the kitchen, do not use a footstool to reach for objects. Move frequently-used items to lower shelves.
- Bathroom equipment such as a raised toilet seat, grab bars, or a tub seat may be helpful. An occupational therapist can help determine which aids would be most helpful for you. Everyone should use a non-stick rubber mat or self-stick strips on the floor of the tub or shower.
- Put a nightlight on the path from the bed to the bathroom if the area is normally very dark.
- In the bedroom, make sure there is a bedside lamp in easy reach so that you can turn it on if you have to get up during the night.
- Always get up slowly after sitting or lying down.
- Wear your glasses and hearing aids if required.
- Take your time when going up and down the stairs. Be sure that stairways are well-lit, free of clutter, and have a secure handrail. Stairway carpeting should be secure. Remove throw rugs.
- Remove clutter throughout your house. Pathways should be cleared of cords or wires by coiling them or taping them to the wall.
- If you have pets, consider removing your pet from the home during your early recovery stage, or arrange for family/friends to take your dog out for walks. Be careful of active or sleeping pets as you walk. Place a bell on their collar so you are aware of their movements. Try to keep pet toys in a designated area to reduce the risk of tripping over them.
- Never rush to answer the telephone. Ask friends/family to allow the phone to ring many times, allowing you time to answer. An answering machine or a cordless phone can be helpful.
- Keep emergency numbers in large print near each phone.
- In the garden put tools away, wear supportive shoes, and avoid walking on wet grass.
- Use your walking aid indoors and outdoors if one has been recommended.
- Indoors and out, be sure shoes fit properly. Footwear should have support around the heel and rubber soles. Try elastic laces if you have difficulty tying shoes.
- Do not carry too many packages (use home delivery or pushcart).
- When walking outdoors avoid walking on unmaintained sidewalks, unlit streets, and icy surfaces. Try to walk with a walking partner. Consider other options such as walking in a mall for exercise.

***Know your limits. If you have had falls in the past, think about possible causes and think about ways to prevent falls in the future.***

## FINAL CHECKLIST FOR HOSPITAL

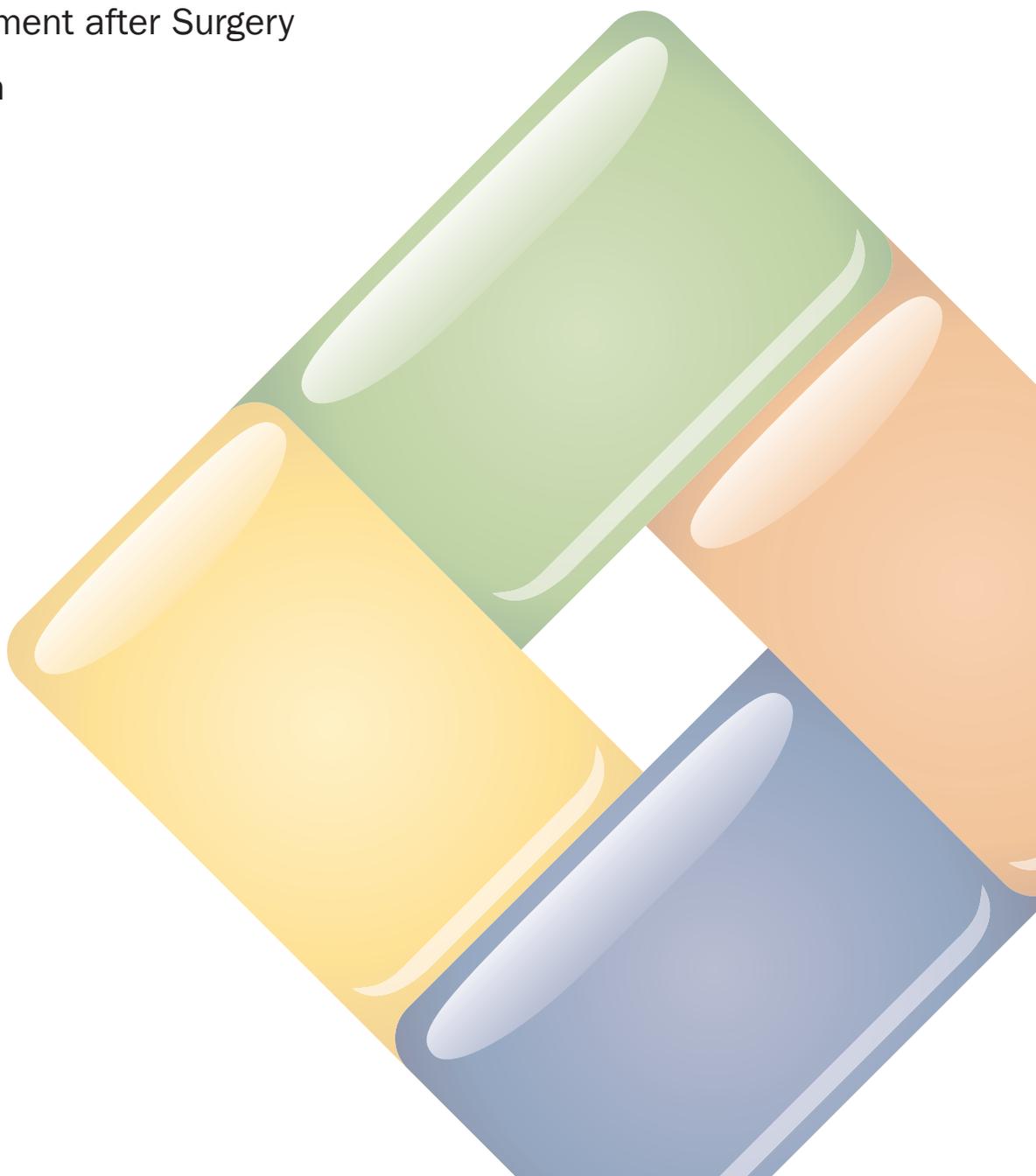
- Your health card
- Supplementary Insurance information with insurance company policy/certificate group plan
- Your copy of Power of Attorney for Personal Care document (if you have not provided it to Pre-Admission Clinic)
- Current Medications in their original containers
- Comfortable clothing including: a short bathrobe, loose fitting clothing such as t-shirts, sweat pants (without elastics at the ankle), shorts and socks to protect your heels
- Well-fitting, supportive shoes with non-slip soles that you can slip on without bending over
- If you wear glasses, contact lenses, a hearing aid or dentures, be sure to bring a case to put them in, as well any cleaning solutions. These should be labelled with your name and telephone number.
- An address book or list of telephone numbers and addresses of your family and friends
- Personal hygiene items such as toothbrush, toothpaste, mouthwash, shampoo, comb, brush, soap, deodorant, tissues (e.g. Kleenex), and razor (men). **No scented products please.**
- If you have a walker or crutches at home, please have someone bring them to the hospital after your surgery
- Any dressing aids recommended by the occupational therapist from CCAC

**Please be advised that the North Bay Regional Health Centre is not responsible for money, valuables or other personal property including eyeglasses, hearing aids and dentures.**

## DURING YOUR HOSPITAL STAY

### **In this section, you will learn about:**

- On the Day of Surgery
- Information about Anesthesia
- Types of Anesthesia
- Pain Management after Surgery
- Rehabilitation



## ON THE DAY OF SURGERY

Please enter the Regional Health Centre by the East Main Entrance. In the lobby a volunteer will direct you to Day Surgery. If no volunteers are present, take the elevators next to the hospital tuck shop to the 3rd floor. Upon leaving the elevator, turn to the right and walk down the hall to the Day Surgery Department. Please arrive 2 hours before your scheduled surgery time, or at a time specified by the Pre-Admission Clinic nurse.

### Day Surgery Unit

A nurse will meet with you, update your health history, and review your medications. Your blood pressure, pulse, oxygen level and temperature will be taken. The nurse may use clippers to remove any hair from your knee area before your surgery. You will be given a special soap and instructed how to scrub your knee before surgery to reduce the chance of infection. An intravenous will be started in your arm before you go to the Operating Room (OR). A nurse from the OR and an anesthetist will also come to review your health history and discuss any concerns with you in the day surgery department before you go to the operating room.

### In the Operating Room

If you are able, a staff member will walk you to the Operating Room area from the Day Surgery department. If not, you will go to the Operating Room by stretcher. Your surgeon will initial your operative site. It is cool in the operating room, so you will be given a warm blanket when you enter the operating room because it is very important you stay warm. You will be introduced to the staff in the room and then the nurse and anesthetist will connect you to monitors that make beeping sounds.

The surgery usually takes 1 ½ - 2 ½ hours. You will then be taken to the Post Anesthetic Care Unit (PACU), where you will be monitored for at least 1 hour before you are taken to your room. Note: Sometimes you will stay longer in PACU if your room on the Surgical Unit is not ready.

### Post Anesthesia Care Unit (Recovery Room)

After your surgery, you will first wake up in the recovery room. You will have:

- oxygen on by mask or in your nose by nasal prongs
- a blood pressure cuff and
- a probe on your finger

The recovery room nurse will:

- Frequently check your blood pressure, pulse, oxygen levels and breathing.
- Assess your pain and give you medication for your pain.
- Ask you to do deep breathing exercises and encourage you to do these exercises frequently.
- Check the level of freezing if you have had spinal anesthesia. The nurse will be checking you with ice.
- Ask you to flex your foot towards your face and point your toes down.
- Check for pulses in your feet.

You will have a large dressing on your knee and possibly a drainage tube coming from under the dressing. When you are ready, you will be taken to your room on the Surgical Unit. Afterwards, you may not remember your time in PACU.

## On the Surgical Unit

After your surgery, you may have oxygen on by mask or in your nose. The nurse will encourage you frequently to do deep breathing, and foot and ankle exercises.

The nurse will also:

- Check your blood pressure, pulse, temperature, oxygen level, breathing and dressing regularly.
- You will have an intravenous (IV). This will provide fluids until you are able to drink and eat normally. As well, this is how you will be given some of your medications.
- You may experience pain after your surgery. Ask your nurse for pain medication. Your doctor will discuss other options for pain management with you. The nurse will also provide you with medication for nausea when you need it.
- There will be a dressing (bandage) over your knee incision. There may also be a drainage device near the incision. This device is to collect any fluid that might build up. The nurses will check and/or empty this device often. The drainage device is removed 1 to 2 days after your surgery. The staples or stitches are removed 14 days after your surgery.
- Ice will be placed on your knee to help reduce swelling and pain. This bag of crushed ice will be placed in a towel over your knee for 10-15 minutes.
- The nurse will help you in turning at least every 2 hours. This will help avoid pressure on any one area of your skin. When lying on your back, your bed should not be higher than 30 degrees, except at mealtime. This relieves pressure from your tailbone.
- Remember to wear socks when lying in bed. The nurses will also put foam heel pads (posies) on to protect your heels from pressure.
- You will know if there is too much pressure on any one area of your body if your skin has a burning sensation. If this happens, you are to tell your nurse and doctor immediately.
- You will receive a blood thinning medication to help prevent harmful blood clots from forming. You will go home on a blood thinning medication.
- You will start with a liquid diet. Once your bowels are functioning properly (passing gas), you will gradually return to your regular diet.

## INFORMATION ABOUT ANESTHESIA

### Anesthesia

All surgeries require some form of anesthesia. Anesthesia is a medication that stops you from feeling pain and other sensations. It can be given in various ways and does not always make you unconscious. The anesthesia chosen is based on factors such as physical condition, the types of medication you are taking, the nature of the surgery, and your reactions to medications. The medication is given to you by an anesthesiologist.

### Anesthesiologist

Your anesthesiologist is a physician with specialized knowledge and training in giving anesthetics, controlling pain, and treating serious medical illnesses or emergencies. Their goal is your safety and comfort during and after your surgery. This doctor gives you the anesthesia during the surgery. Your anesthesiologist can offer you options to best suit you and your surgery. You will help make the decision about which option to use. The anesthesiologist will stay with you and monitor you closely throughout your surgery. The anesthesiologist is also responsible for helping you manage your pain after the surgery.

### Before the Anesthetic

During anesthesia, your body systems that keep food and drink safely in your stomach become weak. Food and drink may find their way out of your digestive system into your lungs (by vomiting or regurgitation) which can cause serious problems. This is why it is important to have an empty stomach before your surgery.

**You must not have anything to eat after midnight the night before your surgery, but you may have clear fluids (e.g. water, apple juice, black coffee, clear tea, clear pop, popsicles and Jell O). You must not have anything at all to drink for 4 hours before your surgery. Medication that you have been instructed to take should be taken with a sip of water only.**

## TYPES OF ANESTHESIA

For knee replacement, two kinds of anesthetic are common: general or spinal. You will have an opportunity to discuss with your anesthesiologist the type that is best for you. Most patients having a joint replacement have a spinal anesthetic, which will make you numb below the waist, allowing the surgery to proceed. You will also be given medication during the surgery to help you relax and you may even doze off. A CD player with headphones is available for your use during the surgery— if you have a favourite CD, bring it with you. The decision about the type of anesthesia is influenced by your general health and the type of surgery you are having. There are many benefits to spinal anesthetic which you can discuss during your visit to the Pre-Admission Clinic.

## General Anesthetics

General anesthesia often involves multiple drugs to be administered. Your anesthesiologist will formulate a plan based on your general health and type of surgery you are having. With general anesthesia you are unconscious during the surgery, your breathing is assisted or controlled, and a tube is placed in your mouth/throat while you are unconscious. When the surgery is finished, the tube is removed while you are coming out of the anesthetic. Most patients do not remember having this breathing tube in. You may remember waking up in the operating room at the end of surgery or in the recovery room.

*What are the risks of general anesthesia?*

- Mild sore throat for 1 to 2 days.
- Possible tooth damage from breathing tube.
- Nausea/vomiting.
- Slight confusion or memory loss can happen in older people and usually lasts for a short time only.
- Very RARE but serious risks may include: stroke, heart attack and death. These risks are very dependent on the patient's medical status.

## Spinal/Intrathecal Anesthetic

With spinal/intrathecal anesthesia, medication is put in the spinal fluid around the spinal column. Depending on the medication used, it will either numb/freeze the nerves so that you have no feeling or movement in your legs, or it will reduce the pain you feel. You also may feel sleepy. This numbness can last for 1 to 2 hours after the surgery or can last for up to 24 hours, depending on the medication used. Spinal/intrathecal anesthesia is very safe and useful for surgeries in the lower half of the body.

Typically, a sedative to help you relax is given before the spinal is performed in the operating room. The anesthesiologist will freeze the skin on a small area of your back before using a small needle to inject medication into the spinal fluid. Once the medication is in, the needle is removed.

During a spinal anesthetic, the anesthesiologist may give you medication to provide good sedation and to take away anxiety. Depending on your level of anxiety, you may be adequately sedated so that you fall into a light sleep. You will NOT feel or see anything during surgery. Most patients do not remember hearing anything either. You may also listen to music—ask your anesthesiologist.

*What are the Risks of Spinal Anesthetics?*

- You may experience a headache; the risk is less than 0.5%.
- Decrease in blood pressure.
- Itchiness.
- Small area of tenderness over the needle site for a few days.
- Very RARE but serious risks include nerve damage from the needle (which may be temporary or permanent), bleeding and infection. These risks are very dependent on the patient's underlying medical status.

## Nerve Blocks

A Nerve Block is an injection of local anesthetic or “freezing” medication near the nerves that go to your surgical site (similar to the dentist freezing your mouth to do dental work). This makes the area feel numb and pain free. Nerve Blocks provide up to 24 hours of pain control and can be used along with a spinal or general anesthetic.

Benefits of Nerve Blocks include:

- Reducing amounts of other stronger pain medications needed.
- Avoiding the side effects associated with other pain medications, such as nausea and drowsiness.
- Providing long lasting relief for up to 24 hours with few side effects.

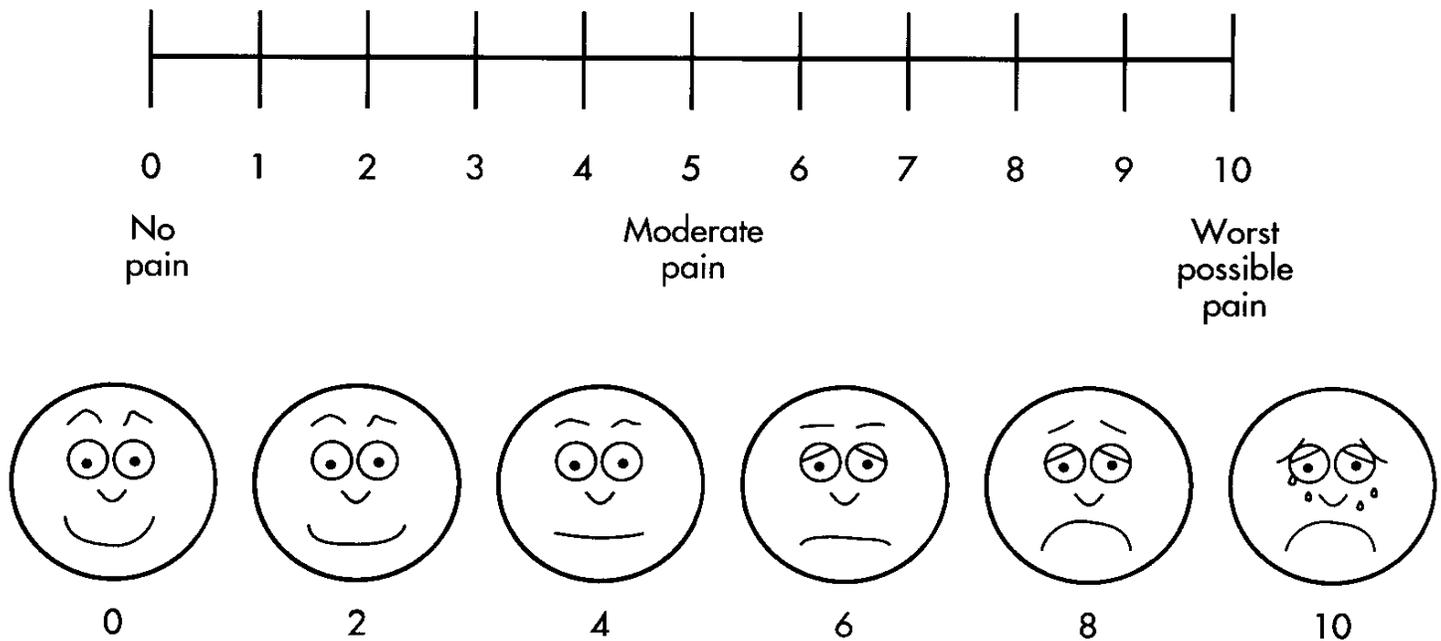
Risks of Nerve Blocks include:

- Less than 1% of patients have a “pins and needles” sensation in the area that may last for 3 to 4 weeks; permanent nerve injury is extremely rare.
- In a small number of patients, local anesthetic may be injected into the blood stream, causing ringing in the ears and a metallic taste in the mouth – these symptoms are not harmful and will soon go away, but please let your anesthesiologist and/or nurse know if you experience them.

## PAIN MANAGEMENT AFTER SURGERY

Help with pain control is provided by the Acute Post-Operative Pain Service, which is run by the Department of Anesthesia. The team includes anesthesiologists and nurse clinicians. Our goal is to make sure you are as comfortable as possible. Good pain control allows you to exercise and progress with your activity, which is important for a successful recovery. It is not a good idea to “put up with the pain.” We use a pain rating scale where 0 = no pain and 10 = worst pain. You will be asked to rate your pain using this scale. This helps us measure the success of the medication in reducing your pain to an acceptable level.

### Pain Rating Scales



There are several methods of pain control available. Your anesthesiologist will discuss which methods are best for you. They include:

- Oral pain medication & multi-modal analgesia (see below)
- Nerve blocks
- Patient-controlled analgesia (PCA)

## Oral Pain Medication

There are several different types of oral pain medication (taken by mouth) available, depending on what works best for you. You will be given several different types of pain pills on a regular basis. Each pill works differently in your body and reduces the need for stronger pain medication.

If the medication does not control your pain, please discuss this with your nurse. Additional or different pain medication can be given.

## Patient Controlled Analgesia

Patient-Controlled Analgesia (or PCA) is a pump containing pain medication. It connects directly to your intravenous line and provides fairly rapid pain relief. The PCA allows you to control your pain safely and effectively, by pushing a button when you experience pain. The pump will deliver you a small dose of pain medication. The pump is set-up to allow pain medication at specific time intervals, with a maximum amount allowed. This means you cannot take too much. The dosage of pain medication can be adjusted, so let your nurse know how well your pain is controlled.

It is important that **only you** push the PCA button, not friends or family members. The PCA is used for the first 24-48 hours after your surgery. Side effects, such as nausea or itchiness, may occur. Medication can be given to relieve these symptoms.

## Spinal/Intrathecal Analgesia

Once the spinal/intrathecal medication has been given, the nurse will ask if you are sleepy, check the feeling in your leg, and ask if you are feeling pain. The nurse will continue to ask these questions until you have full feeling in your legs or for 24 hours after your surgery, depending on the medication used.

## REHABILITATION

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, reduce the risk of blood clots in your legs, reduce pain, and start your bowels moving.

The physiotherapist and a rehabilitation assistant will work with you throughout your stay. They will teach you how to:

- Walk with a walker and/or crutches
- Do your daily exercises
- Use the stairs safely

The occupational therapist may also work with you; They will:

- Do daily activities, such as dressing and bathing
- Make equipment recommendations
- Teach you energy conservation techniques

You will be discharged from the hospital when:

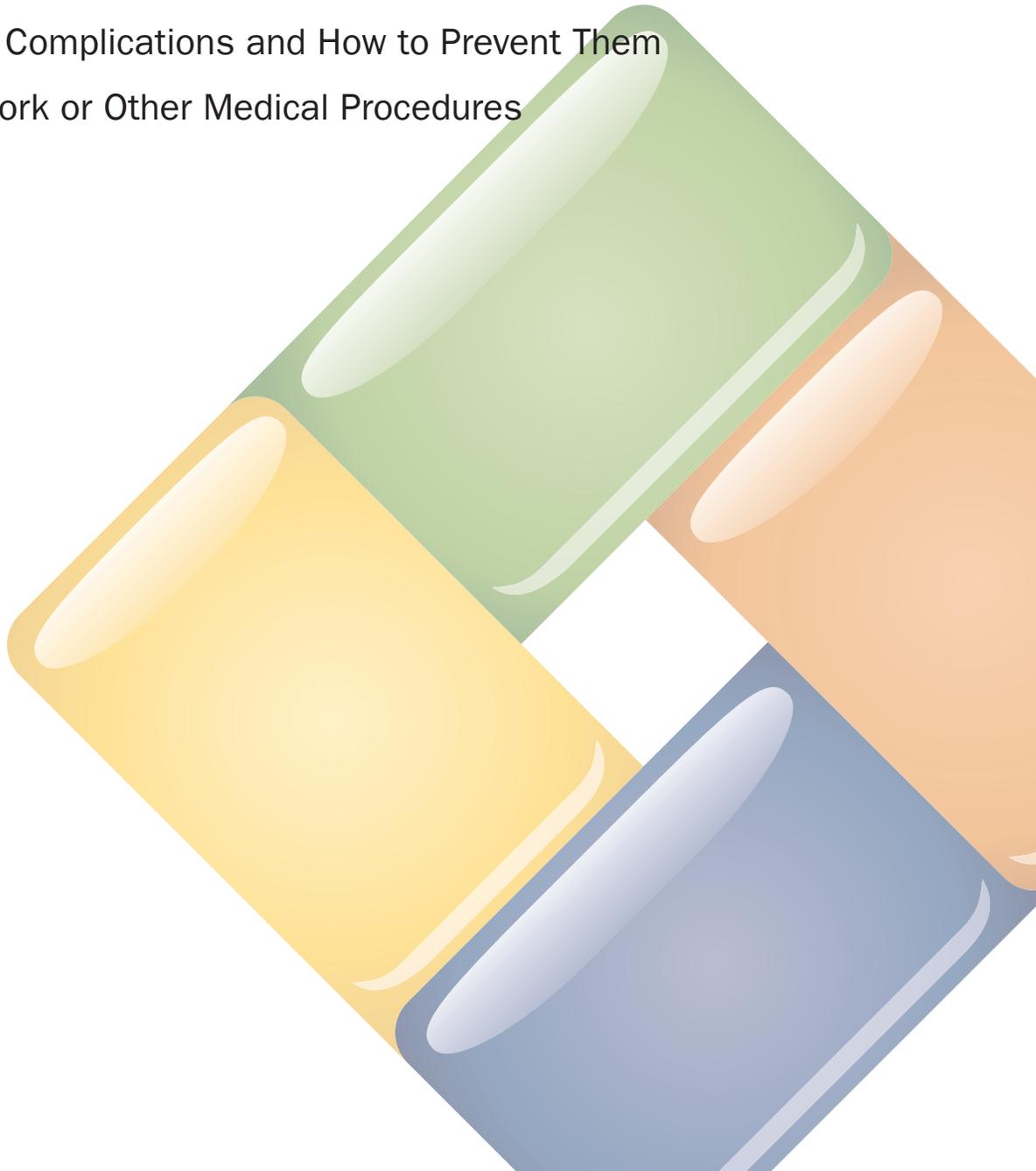
- The doctor feels you are ready
- The physiotherapist feels you are able to get around safely

It is recommended that you consult your doctor if you have any concerns.

## AFTER SURGERY

### **In this section, you will learn about:**

- Physiotherapy Follow-up
- Transportation
- Everyday Activity Guidelines
- Equipment Checklist
- Potential Complications and How to Prevent Them
- Dental Work or Other Medical Procedures



## **PHYSIOTHERAPY FOLLOW-UP**

Once you are discharged from the hospital, you will need to have physio follow-up. The following options are available to you.

### **Outpatient Physiotherapy**

If you live in the North Bay area, you are welcome to attend our knee class at the North Bay Regional Health Centre. This one-hour class is held in our outpatient physiotherapy department and meets twice a week. The physiotherapist working with you in the hospital can arrange this for you.

If you will be attending physio at a hospital other than North Bay, a referral will be faxed to the hospital at your Pre-Admission Clinic visit. Before your surgery, you should call the physio department to confirm your appointment date and time.

### **Private Clinic**

If you will be attending a private clinic, a copy of your referral (original will stay on your chart) will be given to you during your Pre-Admission Clinic visit. You will need to arrange this appointment yourself by contacting the physio clinic of your choice.

### **North East Community Care Access Centre (NE CCAC)**

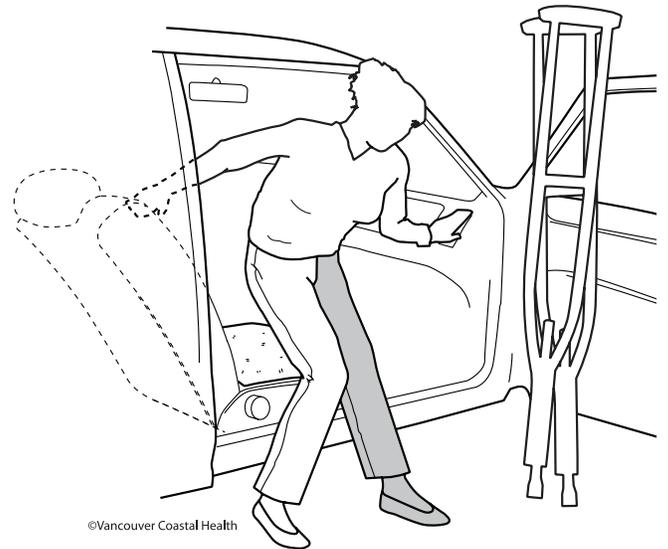
If you are not able to access physiotherapy in your community, a physiotherapist from NE CCAC can come to your home. This can be arranged for you while you are in hospital.

## TRANSPORTATION

You should not drive any vehicle for at least 6 weeks after your surgery. Your surgeon will advise you further at your 6-week check-up.

### To get into the car as a passenger:

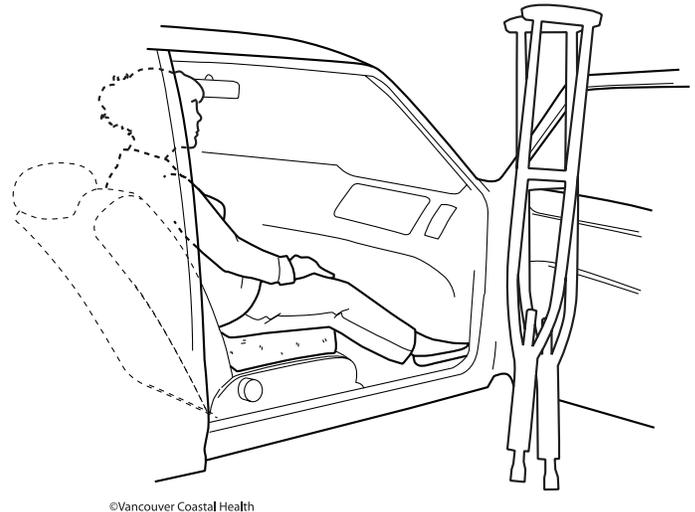
- Have the driver park away from the curb if using a car. If you are using a van, SUV or truck, use the curb to stand on. If a curb is not available, bring a step stool or short box to step onto when getting in or out of the vehicle.
- Make sure the seat is pushed back as far as possible to give maximum leg room.
- Recline the back of the seat a little, so that you will not bend more than 90° as you turn and swing your legs.
- If the car seat is low, use a firm cushion to raise the height.
- Stand with your back to the car so you feel the seat touching your legs.
- Lower yourself slowly, keeping the operated leg forward.
- Slide well back in the seat.
- Swing your legs into the car gently as you turn to face forward.
- You may find it easier to transfer if you place a 'slippery' material over the seat or cushion (example: plastic garbage bag).



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



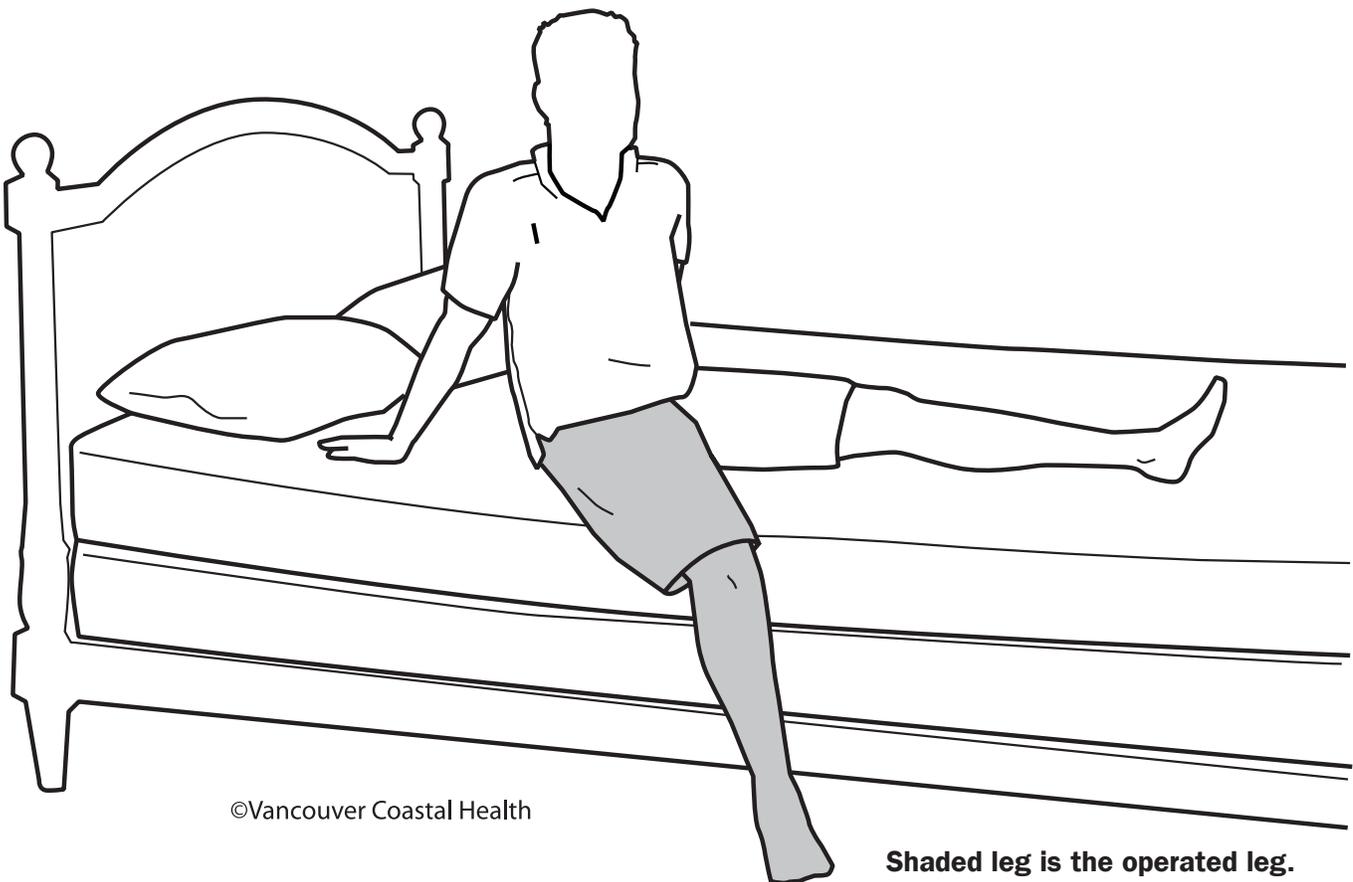
**Shaded leg is the operated leg.**



## EVERYDAY ACTIVITIES GUIDELINES

### Getting into Bed

- Sit at the side of the bed. It may be easier to get into bed on your stronger side.
- Slide back across the bed, using your arms for support.
- If necessary, a half bed rail can allow you to get in and out of bed more easily.
- Lift your operated leg into bed, or use a “leg lifter” if needed.



### Getting Out of Bed

- Slide your body to the edge of the bed
- Use your arms to push yourself to a sitting position.
- Slide your operated leg off the bed
- Bring your body to a sitting position at the bedside

## Bathing

- You must not get your incision wet. This means that at first you should sponge bathe.
- When the nurse removes your staples or stitches, you will be advised if you can get the incision wet.
- If you want to shower in the bathtub, you may need to use a bath bench. If you have a walk-in shower, you should use a seat with arms, or a chair and a grab bar to get up and down safely. A long-handled bath sponge can be used to wash your legs and feet.
- Never use soap dishes or towel racks to hold onto. Serious injuries have occurred because they do not support a person's weight. Professionally installed grab bars should be used.
- You may shower while standing, provided that a rubber mat is used to prevent slipping.

## Sitting Down

- Use a firm chair with arm rests
- Back up to the chair until you feel the edge behind your knees
- Move your operated leg forward and reach back for the arm rests
- Slowly lower yourself into the chair



**Shaded leg is the operated leg.**

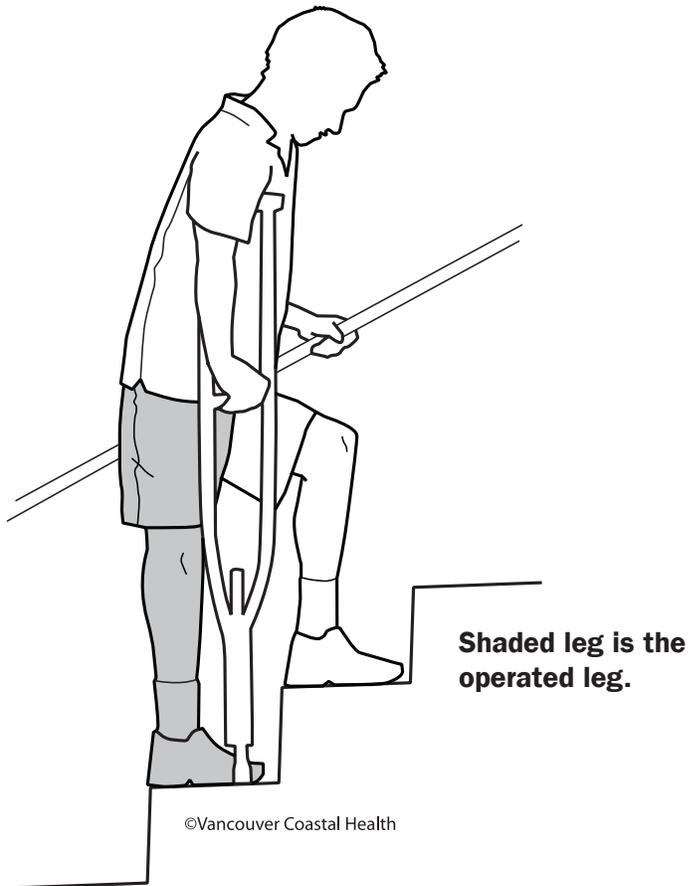
## Stairs

While you are in the hospital, your physiotherapist will teach you how to go up and down the stairs.

A handrail will make it easier and safer for you. Simply place one hand on the railing and both crutches (or canes) on the other side of your body. If you do not feel safe on stairs, have someone assist you.

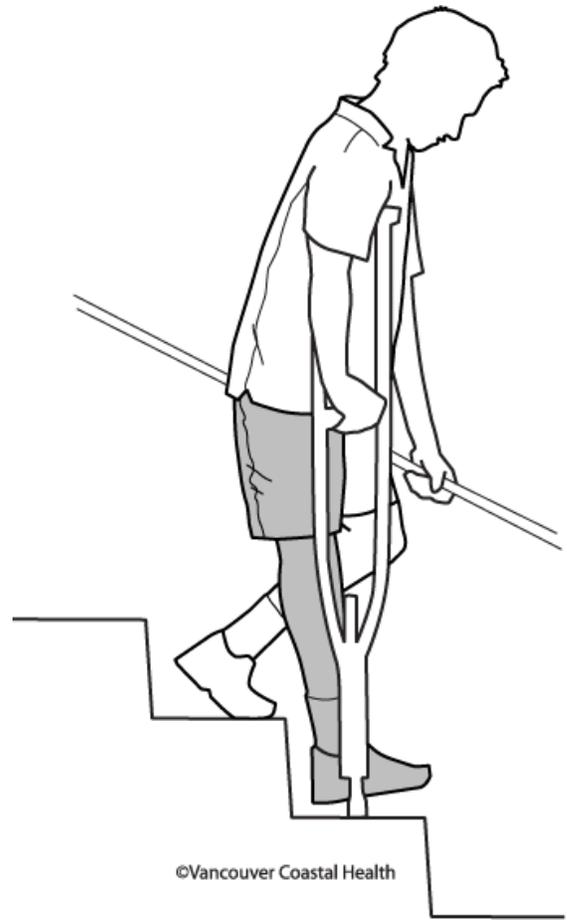
### Going UP the stairs:

- Use a handrail and/or crutches (cane)
- Step UP with your good (non-operated) leg first
- Follow with your operated leg and crutch (cane), one stair at a time



### Going DOWN the stairs

- Use the handrail and/or crutches (cane)
- Place your crutch (cane) on the step below
- Step DOWN with your operated leg first
- Follow with your good (non-operated), one stair at a time



**Remember-** Good leg (non-operated) leads going up and bad (operated) leg leads going down.

## Equipment Checklist

This is a list of equipment that you might find helpful to use after your surgery. Your physiotherapist or occupational therapist can make recommendations for you. Please refer to the list of vendors in North Bay below.

### Bathroom

- Raised toilet seat (With or without armrests)
- Toilet safety frame
- Non-slip bathmat
- Long-handled sponge
- Hand-held shower hose
- Shower chair
- Tub Transfer bench
- Removable tub clamp
- Grab bars

### Dressing Equipment

- Sock aid
- Elastic shoelaces (otherwise use slip-on shoes with an enclosed heel)
- Long-handled shoehorn
- Long-handled reacher

### Other

- Urinal
- Commode
- High-density (firm) foam cushion

### Vendors in North Bay

#### MEDchair

397 Wyld Street  
705-476-5797

#### Shopper's Home Health *(Open Saturday)*

301 Worthington Street West  
705-475-0885

## POTENTIAL COMPLICATIONS AND HOW TO PREVENT THEM

**Breathing problems** such as pneumonia can occur after any surgery. It is important to do several deep-breathing and coughing exercises every hour when awake for the first few days after your surgery. This helps provide oxygen to your lungs and keep your airways clear. Sitting up, getting out of bed as soon as possible, and being active also help prevent breathing problems. **It is very important to decrease or stop smoking prior to your surgery to decrease complications with your lungs after your surgery.**

**Cardiovascular complications** (heart problems) can occur due to the stress of surgery. Surgeries impose an additional workload on the heart. This is why it is important to have a thorough health assessment before your surgery.

**Deep Vein Thrombosis (DVT)** is a blood clot which can develop in the deep veins of your legs after surgery. This is often associated with lack of movement, so early activity is encouraged. It is important to move your ankles up and down several times an hour. This is called “ankle pumping”. You are also urged to tighten and release the muscles in your legs. These exercises promote your circulation. Anticoagulants (blood thinners) will also be given to prevent blood clots.

### **Medication to prevent blood clots**

You will be given medication to prevent blood clots during the first weeks following your surgery. These medications will be given in either a pill or a needle. If needles are ordered, you will need to learn how to give these to yourself, so that you will be able to do so once you are at home. You will be taught how to do this while you are in hospital. You may require help for this if you can't do it yourself. Talk to your nurse and doctor when you are in the hospital for more information.

**Pulmonary Embolism (PE)** can occur when blood clots from the deep veins in the legs or pelvis break off, travel up to the lung, and lodge there. If the clot is large enough, all circulation to the lungs may be cut off. This is a serious problem. Anticoagulants (blood thinners) are given after surgery to prevent this. Deep breathing exercises, ankle pumping, and early activity will also help prevent this complication.

**Urinary problems**, especially trouble passing urine, can happen following any type of surgery. Sometimes a catheter (tube) is inserted into the bladder to drain the urine. The catheter can be left in place for a few days, or removed right after the bladder has been emptied. Let your nurse know if you are having any difficulty.

**Nausea** is the most common side effect after surgery. Medication may be given to help the symptoms, so let your nurse know if you are having this. It is important to take your pain pills with food to protect your stomach.

**Paralytic Ileus** is the stretching of the bowel with gas. This can happen when the bowels stop working properly. As a result, gas builds up and causes abdominal pain, bloating and vomiting. To prevent this, early activity is important to help your bowels to function normally.

**Constipation** occurs because pain medication can make your bowel sluggish. Stool softeners are given twice a day to help prevent this. If the stool softeners are not effective, ask your nurse for a laxative. Lots of liquids, a high fibre diet and activity also help.

**Allergic reactions** vary from a mild rash to an intense reaction that can interfere with your breathing. Please let us know if you have any allergies. We will make sure it is recorded in your medical record.

**Skin irritation and breakdown** can be caused by the pressure from lying in bed. It is important to change your position often while in bed and to get up as much as possible after your surgery. The nurses and therapists will help you. Socks or heel posies will help protect your heels when you are in bed.

**Confusion and delirium** can sometimes occur in older people after surgery. You may behave differently and see or hear things that aren't really there. This usually goes away in a few days, but can last for several weeks. Many things can contribute to this, such as the anesthetic, pain medication, lack of sleep, and alcohol withdrawal. It is important to let us know if you have had this with other surgeries. Wearing your glasses and hearing aids can help. We also advise that you reduce your alcohol intake several weeks before your surgery.

**Infection** is a possible problem after surgery. The risk of infection is reduced:

- Through careful surgical technique and the use of intravenous antibiotics before and after your surgery.
- By using the special antiseptic (germ-killing) soap at home before coming for your surgery. This soap and instructions on how to use it will be given to you at your Pre-Admission Clinic Visit. It is very important that you follow these instructions.
- By not shaving the hair on your legs from 7 days before your surgery until 2 weeks after your surgery.

Any time you have surgery there is a chance of infection. The signs of infection are:

- Increasing pain
- Increasing redness or swelling around your incision
- Drainage from the incision and/or
- A fever over 38° Celsius or 99.5 ° Fahrenheit.

Remember...Getting out of bed and walking as soon as you are able will help prevent many of these problems and allow for a smooth recovery.

## **DENTAL WORK AND OTHER MEDICAL PROCEDURES**

It is important to tell your health care professional that you have had joint replacement surgery before having dental work or medical procedures (including procedures with the bladder, prostate, lung or colon). You may be put on antibiotics to prevent infection from moving through your bloodstream to your new joint. Talk to your dentist or doctor about what is right for you.

# RESOURCES

## ADDITIONAL RESOURCES

For information on joint replacement surgery: [www.myjointreplacement.ca](http://www.myjointreplacement.ca)

For information on the arthritis, arthritis programs and resources offered by The Arthritis Society: [www.arthritis.ca](http://www.arthritis.ca)

For information on stopping smoking for safer surgery: [www.stopsmokingforsafersurgery.ca](http://www.stopsmokingforsafersurgery.ca)

For information on healthier eating: [www.dietitians.ca/eatwell](http://www.dietitians.ca/eatwell) and [www.eatrightontario.ca](http://www.eatrightontario.ca)

For information on blood transfusion: [www.transfusionontario.org/patients/index.html](http://www.transfusionontario.org/patients/index.html)

For information on maximizing your activity after knee replacement: [www.orthoconnect.org](http://www.orthoconnect.org)

## Hospital Physiotherapy Departments

Location	Hospital	Telephone Number
Burk's Falls	Muskoka Algonquin Healthcare	705-382-2900 X 235
Englehart	Englehart and District Hospital	705-544-2301
Kirkland Lake	Kirkland and District Hospital	705-567-5251
New Liskeard	Temiskaming Hospital	705-647-1088 X 2286
North Bay	North Bay Regional Health Centre	705-495-7570
Sudbury	Health Sciences North	705-523-7297
Témiscaming	Centre de Santé	819-627-3385
Timmins	Timmins and District Hospital	705-267-6394

To find a registered physiotherapist in your community, go to the College of Physiotherapists of Ontario website:

<http://publicregister.collegept.org/PublicServices/Start.aspx>

## North East Community Care Access Centre (NE CCAC)

(In home Therapy , Nursing and Care Coordination Services)

For more information about the NE CCAC or to self-refer, please call:

- 705-476-2222 (North Bay)
- 1-888-533-2222 (northern Ontario)









*“This flyer contains general information which cannot be construed as specific advice to an individual patient. All statements in the flyer must be interpreted by your personal physician or therapist who has the knowledge of the stage and the extent of your particular medical conditions. Any reference throughout the document on specific pharmaceutical products does not imply endorsement of any of these products.”*