

# Knee Replacement Surgery

## Cape Breton Regional Hospital (CBRH)



Please review this guide and bring it to all appointments.



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# Pre-surgical checklist

## What you will need at home after surgery:

- Safety equipment that has been properly fitted.
- Someone to help you at home and stay overnight with you for the first 5 to 7 days after surgery (strongly recommended).
- Consider moving to the main level of your home for the first 2 to 4 weeks after surgery, or move to another location that is more accessible.
- Someone to drive you to appointments for 6 to 8 weeks after surgery.

## Night before or morning of surgery:

- Follow the instructions from the Pre-Admission Clinic about eating, drinking, and taking medications.
- Have a shower or bath.
- Your pre-admission team and/or surgeon may recommend you use chlorhexidine gluconate (CHG) pre-moistened cloths the night before surgery and/or the morning of surgery.
- Remove all nail polish on your fingers and toes.
- Remove all jewelry. Do not bring jewelry with you to the hospital.**

## What to bring to the hospital:

- This guide.
- Your 2-wheeled walker so you can practice. Ask a family member or friend to hold onto it until it is needed.
- 2 to 3 sets of loose-fitting clothing (like loose shirts, pants with an elastic waist, etc.).
- Shoes with a rubber sole and an enclosed back (no Crocs™, sandals, or slip-on shoes without a closed heel). Make sure there is enough room to allow for swelling.
- Toiletries (like soap, toothbrush, toothpaste, denture care items, deodorant, etc.). Please remember, Nova Scotia Health is scent-free, so all toiletries and personal care items must be scent-free.
- Dentures, hearing aids, and glasses (if needed), and labelled cases to store them in.
- All prescription medications in their original containers or in blister packs.

## What you will need when you leave the hospital:

- Follow-up appointment information:

- › Your health care team will let you know at discharge who will remove your staples or stitches (if needed). This usually happens 10 to 14 days after surgery.
- › You may also be given follow-up appointment information by phone or mail after discharge.
- Physiotherapy exercises.
- Medication prescriptions.
- Instructions on how to care for your incision (cut) and dressing (bandage) at home.
- Any other important discharge instructions from your surgeon and health care team.

## Why do I need surgery?

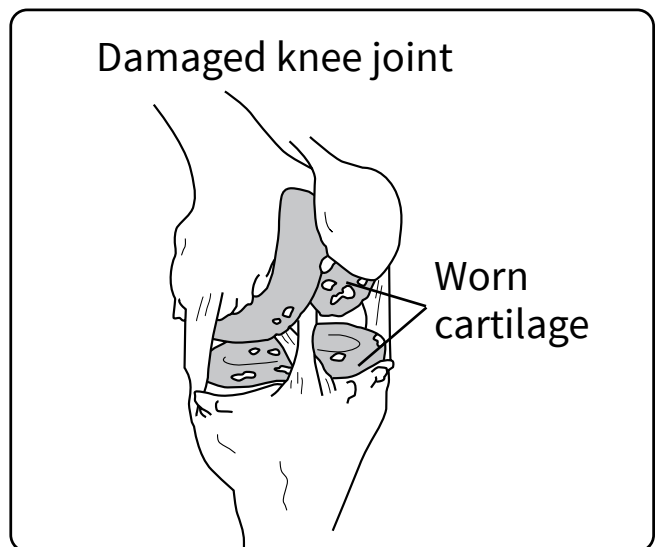
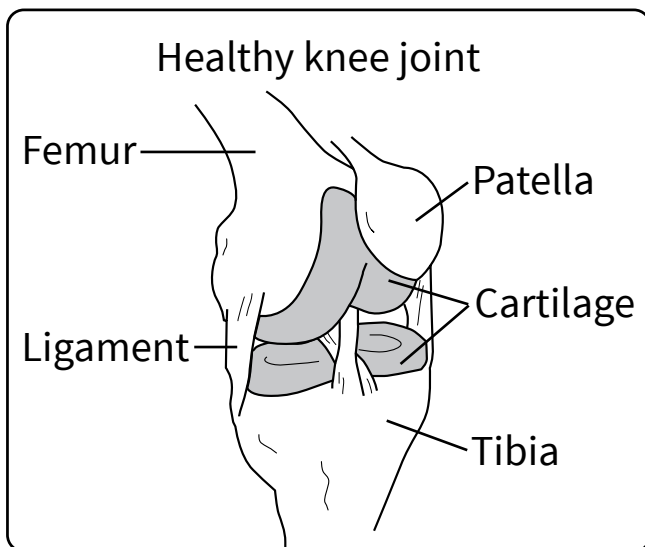
### How does the knee work?

The knee has 3 bones:

- › thigh bone (femur)
- › lower leg or shin bone (tibia)
- › kneecap (patella)

The knee joint works like a hinge, letting the lower leg (shin) bone move back and forth over the thigh bone. This lets you bend and straighten your knee.

Muscles, ligaments, cartilage, and bones all help support and strengthen the knee joint to let it move freely. Cartilage acts as a shock absorber for the joint.



### What is osteoarthritis?

Most people who need knee replacement surgery have a knee that has been affected by arthritis (inflammation or swelling of the joint). This usually gets worse as a person gets older.

# Why do I need surgery?

Osteoarthritis (OA) is a type of arthritis caused by the breakdown of cartilage on the ends of the bones inside a joint.

As the cartilage wears away, or even wears out, the bones may rub directly against each other. This can cause stiffness and pain.

## What is knee replacement surgery?

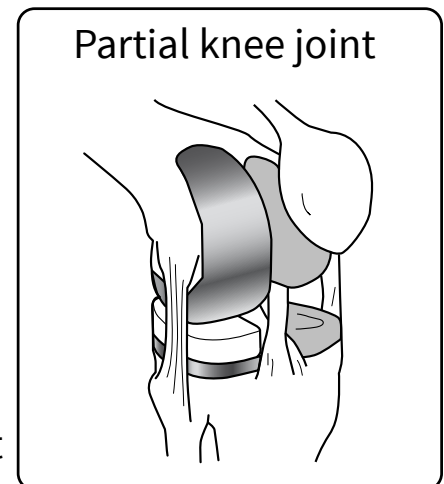
Knee replacement surgery (or arthroplasty) is when a surgeon removes all or part of the knee joint and puts in a new artificial joint (prosthesis).

After surgery, people can usually move the joint more easily, have less pain, and walk more comfortably for many years.

Based on the reason you need the surgery and many other factors, the surgeon will decide which type of surgery is best for you. The main types are:

- **Total knee replacement:** The diseased joint is replaced with an artificial joint. An incision (cut) is made and muscles and ligaments are moved out of the way. The damaged bones are then reshaped to fit the prosthesis. The bottom of the femur and top of the tibia are then replaced with metal pieces, separated by a plastic liner. The muscles are then repaired, and your skin is closed with stitches or staples. This is the most common surgery for OA.
- **Partial knee replacement:** If only part of the knee joint is damaged, the surgeon may decide to replace only the inside or, outside (**unicompartmental**), or **patellofemoral** (knee cap) part of the joint.
- **Knee revision:** Sometimes, parts of an artificial knee needs to be replaced. This may be because:
  - › the joint is loose or worn out
  - › there is bone loss or an infection in the joint

Knee revision surgery can be more complex, and you may need more rehabilitation after surgery. You may not be able to put as much weight on your new joint while you are recovering.



# Why do I need surgery?

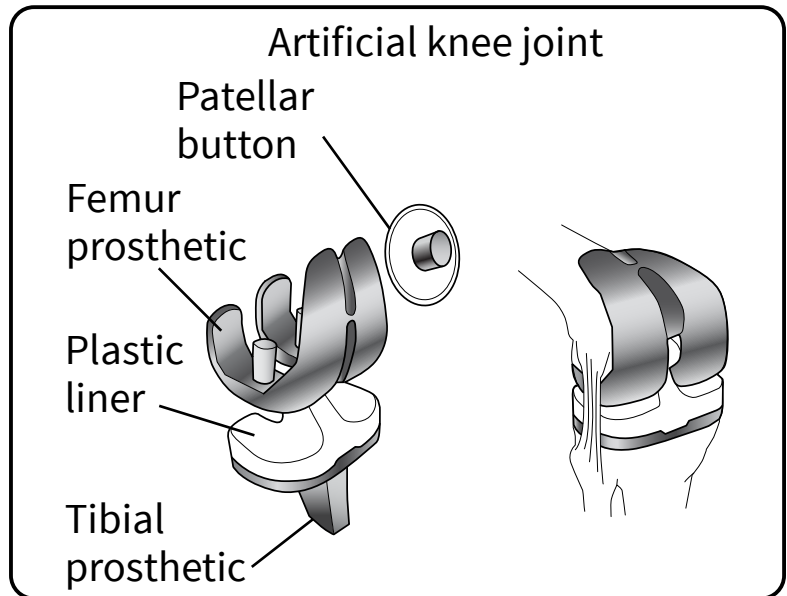
## What is my new knee made of?

Your new knee joint (prosthesis) is made of metal and plastic. The prosthesis makes the knee joint smooth again, helping with pain and making movement easier.

## How is my new knee attached?

- Cemented – The new knee is attached to the existing bone with special cement.
- Non-cemented – A special coating is used that helps the existing bone stick to the new knee. Over time, your body makes new bone tissue that grows into the tiny spaces in the coating, helping the joint to become firmly attached.
- Hybrid – Cemented and non-cemented substances are used.

**NOTE:** Your surgeon will decide what is best for you based on your age, disease type, bone quality, and other factors.



## Knee Guidelines

After knee surgery, you may need to follow **Knee Guidelines** which your surgeon or health care team will review with you. These guidelines will help your joint heal properly after surgery.

1. **Move your knee often.** Do the exercises your physiotherapist has taught you. You are encouraged to bend your knee.
2. **DO NOT put a pillow or support** directly under the back of your operated knee. Pillows and supports cause the muscles and ligaments in the back of your knee to shorten, making it hard to straighten your leg. If you use a pillow(s) to elevate (raise up) your leg, **make sure it is placed along the length of your leg and that your knee is not bent while resting.**
3. **Avoid twisting.** Do not plant your feet on the floor while twisting your upper body. This puts your upper body out of line with your lower body.

# What will happen before surgery?

## How do I get ready for surgery?

### 1. Choose a coach

#### Choose a coach to help support and guide you. They will:

- › come to appointments and/or classes with you
- › listen for information at your appointments to help you remember instructions
- › help you plan your discharge home
- › be available when you are discharged home or to another discharge location
- › stay with you the week after discharge to help you

### 2. Prehabilitation (Prehab)

The more prepared you are both physically and mentally, the better your chances at a successful surgery and recovery. Prehab education and exercise classes help to educate and guide you on things you can do before and after surgery to:

- › increase your strength
- › improve your overall health and well-being

#### Prehab activities include:

- › exercising
- › eating healthy foods
- › managing your weight
- › stopping or cutting back on smoking
- › understanding how to manage your pain
- › keeping a positive attitude
- › getting regular, restful sleep
- › keeping a healthy blood pressure
- › learning how to prepare for surgery and go back home

Prehab is offered in the months leading up to your surgery. Contact your prehabilitation clinic if you have questions or want to be referred.



# What will happen before surgery?

## 3. Exercise

Daily exercise before surgery will help make your recovery faster and easier. It will also help you get into a routine that will be part of your daily rehabilitation (rehab) and recovery after surgery.

Leg exercises will help to get your leg muscles ready for surgery. Exercising other muscles, like your upper body, will also help with your rehab. For example, you use your arms, shoulders, and abdominal (stomach) muscles to get in and out of bed, get up from a chair, and use your walking aids (like a cane or a walker).

If you are not sure how much to exercise, you can follow the “**2 hour**” rule. If your pain is worse than usual for more than 2 hours after exercising, you may be doing too much. Try exercising for a shorter time or with less intensity (force). Over time, you can slowly increase the amount of time and intensity.

**AVOID activities that put a lot of pressure on your joints such as:**

- › jogging or running
- › hiking
- › high-impact aerobics

**Activities that put less stress on your knee joints include:**

- › aquatic (water) exercises (like swimming or water walking/aerobics)
- › walking with or without poles
- › Tai Chi
- › yoga (depending on the type)
- › upper body weight lifting
- › stationary cycling – make sure the bicycle seat is adjusted properly for your height to put less stress on your knee joints
- › exercises recommended by your physiotherapist (see below)

**Before your surgery, complete the exercise program on page 41 at least once a day.**

**If you have questions about activities or exercise, please ask your health care team.**

# What will happen before surgery?

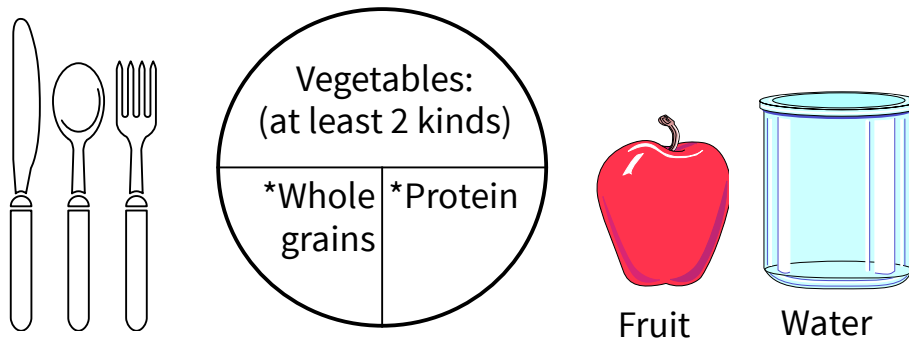
## 4. Nutrition

**Eating healthy foods can speed up your recovery time and lower your risk of infection.** Use Canada's Food Guide to help you choose healthy foods and to find information on serving sizes and healthy meal ideas:

› <https://food-guide.canada.ca/en/>

You should have plenty of vegetables, fruit, whole grains, and a variety of protein sources. Eating healthy before your surgery will give your body the nutrients, vitamins, minerals, fibre, and antioxidants it needs for recovery.

**Below is an example of a balanced plate. You can use this as a guide to understand portion sizes and meal balance:**



\*Whole grains (like brown rice, whole grain pasta/bread, quinoa, oats, barley)

\*Protein (like fish, lean meat and poultry, beans, lentils, cheese, yogurt, milk, soy milk)

**The following list explains some common types of nutrients and supplements. Please talk with your dietitian, primary health care provider (family doctor or nurse practitioner), or pharmacist if you have questions about any of the following:**

**Fibre and water** – helps avoid constipation (not being able to have a bowel movement/poop) that often happens after surgery. Try to consume 25 to 35 grams of fibre and 8 cups (2 litres) of fluids per day. Fibre sources: whole grain cereals and breads, vegetables, fruit, beans, lentils, and nuts.

**Protein** – needed to keep your strength before surgery and to help with healing after surgery. You may need to increase your protein (by about 20 to 50%) both 1 week before surgery and after surgery while healing. You can increase your intake of protein-rich foods during meals and snacks.

# What will happen before surgery?

**Iron** – carries oxygen to the tissues to help the healing process and is a key part of hemoglobin. Low hemoglobin can cause anemia (low blood count) and make you tired, slowing your recovery time. Sources: liver, red meat, fish, poultry, leafy green vegetables, fortified cereals, pulses (beans, dried peas, lentils, and chickpeas) and iron supplements.

**Vitamin C** – foods high in vitamin C have been found to slow the progression of OA. Vitamin C also helps your body use iron. Combine iron-rich foods with vitamin C sources to help absorb iron (like spinach salad with oranges and strawberries). Sources: strawberries, oranges, kiwis, grapefruit, tomatoes, peppers, and vitamin supplements.

**Folate and vitamin B12** – promote healing and the formation of red blood cells. Dietitians suggest that people over 50 years of age take a vitamin B12 supplement (2.4 mcg each day). Sources: meat, fish, poultry, eggs, dairy products, and nutritional yeast.

**Vitamin D** – helps with absorbing calcium and slows the progression of OA. Sources: milk, fortified plant-based milks, salmon, mackerel, sardines, and vitamin supplements (400-1000 IU each day).

**Calcium** – helps bones to grow and stay strong and healthy. Try to consume about 1200 mg each day. Sources: milk, plain yogurt, cheese, canned salmon, sardines, fortified plant-based milks, and calcium supplements.

**Omega-3 fatty acids** – increased intake of omega-3 fatty acids has been linked to fewer symptoms of arthritis and inflammation. It also helps with swelling in sore and damaged joints. Sources: fatty fish (like sardines, salmon, trout, herring, mackerel), omega-3 eggs, flaxseed and flax oil, and omega-3 only supplements.

## Managing your weight

Your weight can affect the outcome of your surgery. Being malnourished can slow your healing and recovery after surgery. It can cause poor bone health, lower energy, a weaker immune system, and a higher chance of infection. To check if you may be malnourished, answer the following questions. If you answer yes to both questions, please talk with a dietitian.

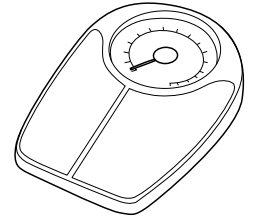
1. Have you lost weight in the past 6 months without trying to lose weight?
2. Have you been eating less than usual for more than a week?

If you are concerned about whether you are getting enough calories or protein, talk with a dietitian to find out if a supplement may be right for you.

# What will happen before surgery?

## If you are overweight:

Each extra pound of weight puts an extra 3 to 6 pounds of force on some of your joints. **Losing extra weight can impact your mobility (movement) after surgery and how long your new joint will last. It can also help to decrease your joint pain.** If you are overweight, try to aim for steady weight loss (one pound a week) before surgery.



## Tips to live a healthy lifestyle with food:

- Eat regular balanced meals – try to go no longer than 4 to 6 hours without a meal or snack.
- Do not rush your meals. Spend at least 20 minutes eating each meal while sitting and relaxing.
- Do not skip breakfast.
- Choose water when you are thirsty.
- Eat more vegetables and high-fibre foods.
- Try to avoid late night snacking.
- Try to have a protein source at each meal and snack.

If you need support with weight management or healthy eating, contact a dietitian in your area. Call 902-835-0253 or email [info@nsdassoc.ca](mailto:info@nsdassoc.ca) to ask about licensed dietitians and nutritionists in Nova Scotia, or talk with your orthopaedic assessment team.

## Meals and food

- It is a good idea to stock up on canned foods, and prepare and freeze meals before your surgery so that you will not have to cook.
- Check with your local grocery store to see if they have a delivery program. Call 211 or visit <http://ns.211.ca> to ask about food support programs in your area.
- **If none of these options work for you, make sure you have a friend or family member who can help you get groceries, prepare meals, etc.**
- Reorganize your cupboards and fridge so that the most commonly-used items are within easy reach so that you do not have to bend down or use a stool.

# What will happen before surgery?

## 5. Oral health and dental work

You should have good oral health before knee replacement surgery. **Tell your dentist about your upcoming knee replacement surgery and let your surgeon know if you have any ongoing oral health issues, such as an infection.** Keeping good oral health after surgery is also important.

We recommend completing any dental or gum work before your surgery. If you need dental work in the first 3 months after surgery, talk to your dentist and surgeon about whether or not they want you to take antibiotics.

## 6. Stopping smoking

You should try to smoke less or stop smoking before your surgery. **Smoking causes slower healing, a higher chance of complications (such as a greater risk of infection), and a longer time spent in the hospital.** Nova Scotia Health is smoke-free and vape-free, so this is a perfect chance to quit.



For this surgery you will need to have an anesthetic (medicine that puts you to sleep). Your lungs should be as healthy as possible to get ready for the anesthetic, as well as for the breathing exercises you will do during recovery.

If you are having trouble trying to stop smoking, talk with your primary health care provider or pharmacist. There may be medications that can help. If you are concerned about withdrawal symptoms, ask your primary health care provider or pharmacist about products such as nicotine patches. **The following resources may help:**

Mental Health and Addictions Program

- › <https://mha.nshealth.ca/en>
- › Phone (toll-free): 1-855-922-1122

The Lung Association of Nova Scotia

- › [www.ns.lung.ca](http://www.ns.lung.ca)
- › Phone (toll-free): 1-888-566-5864 (for support groups in your area)

811 – ask about the Tobacco Free Nova Scotia program

- › Phone (toll-free): 1-866-366-3667 (English)
- › Phone (toll-free): 1-866-527-7383 (French)

Tobacco Free Nova Scotia

- › <https://tobaccofree.novascotia.ca>

# What will happen before surgery?

## 7. Pain management

Taking pain medication can help you stay active, reduce your pain, and help you sleep. **The most common types of medications for managing joint pain include:**

- › **analgesics** – these work quickly to reduce pain without many side effects. Example: acetaminophen (Tylenol®).
- › **anti-inflammatory drugs** – these reduce pain and swelling, but have a risk of side effects, such as bleeding or upset stomach. Examples: aspirin, ibuprofen (Motrin®).
- › **narcotics** – This type of medication tends to have more side effects, most commonly drowsiness, constipation, and nausea (feeling sick to your stomach). Examples: Tylenol® with Codeine No. 3, morphine.

Your primary health care provider may prescribe a combination of these medications for you. Check with them about all side effects and whether or not the medication(s) is safe for you. Tell your primary health care provider and surgeon about all medications you are currently taking, including over-the-counter medicines, vitamins, and herbal supplements.

### Complementary therapies

Some people use physiotherapy, massage, chiropractic, acupuncture, holistic medications, and other therapies to help with their pain.

**Ice** may help to lower pain and decrease swelling.

- Wrap your joint in a towel.
- Apply ice for up to 15 to 20 minutes.
- Repeat every 2 hours (or once your skin has returned to normal temperature and colour), as needed.
- **Do not fall asleep with ice on.**

**Heat** may also help to control pain, reduce muscle stiffness, and relax tense muscles.

- Apply heat for up to 20 minutes, 3 times a day.
- **Do not use heat if your joint is swollen or throbbing.**
- **Do not fall asleep with heat on.**

Applying heat before exercise can help to warm up your joint. Applying ice after exercise can help to calm irritation in your joint.

# What will happen before surgery?

## 8. Activities and services

- Do errands or activities that require you to leave the house before your surgery, such as banking. Cancel any services you will not need while you are in the hospital including home care for the day of your surgery.
- Get a fanny pack or a lightweight backpack to carry small things around your house. This will let you keep your hands free to use your walker or cane. You can buy trays for certain types of walkers, to help you carry things around your home. Please see pages 39 for equipment options (such as renting, loan programs).
- Get a pair of slip-on shoes with an enclosed heel (or shoes with elastic laces) that are a half-size bigger than you usually wear. This will leave room for possible swelling after surgery.

## 9. Arranging for help

- If you do not have someone living with you who can help, arrange to have a support person stay with you after your surgery. The length of time will depend on your personal situation, but you should plan for at least 5 to 7 days.
- Arrange to have someone take you home from the hospital on the morning of your discharge day. **Most people stay in the hospital for 1 day. It is possible that you may go home the same day as your surgery.** Make sure your travel arrangements are flexible.
- Your support person should have a key for your mailbox, a house key, and instructions for caring for your pets and plants. If you are going to be staying at a temporary location after your surgery, make sure that you have arranged for someone to help you at that location.

## 10. How do I get my home ready?

It is important to set up your home or other discharge location before your surgery. This will let you move more safely and freely, lowering the risk of falls, and helping you save your energy.

### Living space

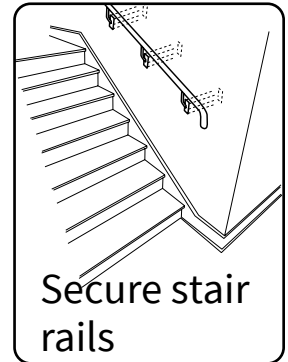
- Set up a recovery area in your home. This should include a firm chair at least knee height (with armrests). Having a higher chair will make it easier to go from sitting to standing when you need to get up. You may use this chair for about 12 weeks. Do not use soft and/or low seating.

# What will happen before surgery?

- If your chair is too low, use firm, dense cushions to make it higher. Make sure your phone and a list of important phone numbers are in easy reach of the chair.

## Floors and stairs

- Remove area rugs, electrical cords, doorway obstacles, and other hazards that may get in the way.
- Make sure hallways, stairs, and bathrooms are well-lit.
- Buy bags of salt or sand if icy weather is expected. Arrange to have someone shovel and take care of your walkways. Stock wood for your wood stove, if needed.
- Make sure there are handrails on all staircases, both indoors and out.
- Make arrangements to stay on the main level of your home for the first few weeks after surgery in case you find stairs too challenging at first. A commode (portable toilet) can be used if your bathroom is upstairs. Consider moving a bed to the main level if your bedroom is upstairs.



## Bathroom

- Add grab bars to the bathtub, and any other recommended equipment, such as:
  - › hand-held shower
  - › bath transfer bench (for tub)
  - › shower chair (for walk-in shower)
  - › non-slip bath mat (inside and outside of shower/tub)
- If you find it hard to get in and out of your tub or shower, talk with your health care team.
- **DO NOT** use towel racks, curtain rods, or toilet paper holders to help you to stand or sit. They are not strong enough to support you.
- You may need a raised toilet seat and/or toilet safety frame, depending on the height of your toilet.
- Install nightlights along the route from your sleeping area to the bathroom.



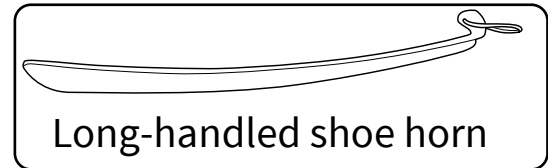
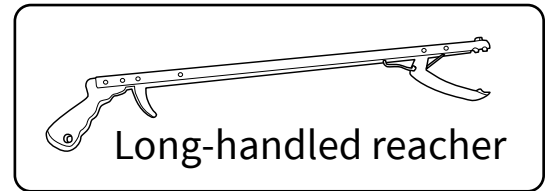


# What will happen before surgery?

Your health care team will work with you to determine your specific equipment needs.

## Dressing/bathing aids (if needed):

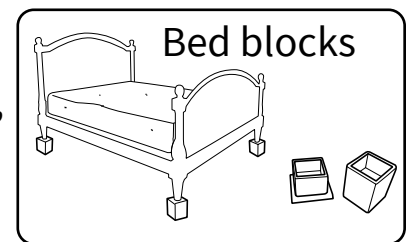
- › long-handled reacher
- › long-handled shoe horn
- › sock aid
- › long-handled sponge
- › elastic laces (or use slip-on shoes with an enclosed heel)



Remember when getting dressed, you should be working on flexing/bending your operated knee as much as you can.

## Bedroom

- Your mattress should be at about knee height. If it is not, consider adding a box spring or bed blocks underneath, to raise it up.
- Set up a bedside table for things you use often.



## Walking aids:

- › 2-wheeled walker (most people)
- › cane



## 11. Where can I get equipment?

If you do not already have the equipment you will need, make sure that you will be able to buy, rent, or borrow what is recommended (from friends, family, or an equipment loan program in your community). **You should have this equipment at home 1 week before your surgery.** Be sure to measure doorways and the spaces in and around toilets, bathtubs, and shower enclosures to make sure the equipment will fit properly.

**Make sure you examine any equipment before your surgery to make sure it is in good working condition.** Remember that equipment is not “one size fits all” — you may not be able to adjust it to fit yourself.

# What will happen before surgery?

## Renting/buying equipment

Many home health care suppliers, such as drugstores and medical suppliers, offer equipment rentals. Some offer “rent to own” as an option. Check in the Yellow Pages™ or online for a list of local suppliers. Private insurance (like Blue Cross®, The Canada Life Assurance Company [formerly Great West Life]) often covers equipment costs with a prescription. Please check with your insurance company about your coverage.

## Equipment loan programs

Some local groups, such as Lions Clubs, The Royal Canadian Legion branches, or Kin Canada (Kinsmen, Kinettes, Kin) clubs, have equipment available to loan to local residents. Check for groups in your area that offer this service.

**The Canadian Red Cross** has an equipment loan program in many areas of Nova Scotia. Equipment is loaned out for 3 months at no cost (with a referral from a health care provider). Check with your local Red Cross or visit:

› [www.redcross.ca](http://www.redcross.ca)

## Income Assistance

If you are on Income Assistance, the length of time that you need equipment may affect where you get it from. If you need it for a short time, borrowing equipment from a loan program may be the best option. If you will need equipment for a longer time, contact your Income Assistance worker to ask about funding. A prescription and 2 quotes from equipment suppliers are usually needed.

## Pre-Admission Clinic

You will be given an appointment for the Pre-Admission Clinic. You will be given the date and time of your appointment by phone or mail. This visit will help you to get ready for your surgery. This **usually happens in the month before your surgery**. This appointment may take up to 3 to 4 hours and may happen in person or over the phone.

**Please complete the Pre-surgical checklist on page 1 and bring it with you to your appointment.**

- **Bring a family member or friend**, preferably your coach, with you to this visit to listen and take notes.

# What will happen before surgery?

- **Make a list of questions and bring it with you.** At this visit, you will be able to ask your health care team questions and talk about any concerns you have.
- Bring all of your prescriptions, over-the-counter medications, and natural health products/supplements in their original containers or blister packs. **You may need to stop taking some medications and supplements before your surgery. This will be reviewed with you during your pre-admission appointment. You will be told what medication(s) to stop taking and when to stop taking them.**
- **You will talk to a nurse.** They will ask you questions about your health, including your medical history and any surgeries you have had. The nurse will give you information about your surgery, including when to stop eating and drinking, when to arrive at the hospital, and where to go when you arrive.
- **You may talk to an anesthesiologist.** This is a doctor who gives medications to put you to sleep or help with pain during surgery. They will talk with you about the pain medicine you will need during and after your surgery.

## **At the Pre-Admission Clinic, you may also have the following tests:**

- › EKG (electrocardiogram) - test that records the electrical activity of your heart
- › blood tests
- › urine (pee) sample
- › X-ray

Depending on the results of these tests, you may need follow-up tests and your surgery may need to be postponed. Your surgery may need to be postponed if you have an active infection (such as a cold or flu) or a skin infection over the joint. **If you feel sick before your surgery, please call your surgeon's office.**

## **Questions you may want to ask:**

- What type of anesthetic will I be having?
- What are the possible side effects and complications of this medication?
- What can I do to prevent complications before and after surgery?
- Will I be able to hear and see what is happening during surgery?
- What should I do if I have pain after surgery?
- If I am given a spinal anesthetic during surgery and do not feel pain right after surgery, should I still have pain medications regularly?

# What will happen during surgery and recovery?

Depending on which hospital you have your joint replacement surgery in, things may look slightly different. Below is a general overview of what to expect.

## Day of surgery

- **Do not bring any valuables with you.** The hospital is not responsible for the loss of any item.
- Bring your Nova Scotia Health Card.
- Bring all of your medications in their original containers or blister packs.
- Go to the Admitting Desk and they will tell you where to go.

## During surgery

A nurse will help you get ready for surgery. They will update your health history and review your medications. Your blood pressure, pulse, weight, and temperature will be taken, and an intravenous (IV) will be started. You will be given a spinal or general anesthetic.

- If you are having a spinal anesthetic (nerve block), a doctor will place a very small needle between 2 bones in your back (vertebrae) and inject local anesthetic (numbing) medication around your spine. You will feel numb in the lower part of your body (hips and below) and will not feel any pain. You will not be able to move certain areas for up to 4 hours after surgery. As the numbness wears off, you will have more pain and discomfort and will need medication for pain.
- If you are having a general anesthetic, you will be given a combination of medications to make you unconscious during surgery. You will not feel anything during surgery.

Your anesthesiologist will give you medication through your IV to make you relaxed and sleepy.

## After surgery

After your surgery, you will be taken to the recovery room for about 1 to 4 hours. You may be given oxygen. The nurse will check your vital signs often, including your pulse and blood pressure. **Tell your nurse if you are in pain.** You may be given pain medication through your IV, as needed.

# What will happen during surgery and recovery?

## How long will I be in the hospital?

People usually go home the day after their knee replacement surgery. Your surgeon may talk to you about outpatient knee replacement surgery where you will get your surgery in the morning and go home in the evening. Your health care team will work with you to make sure you are medically stable (your vital signs and blood work are good), can move safely, and are able to manage daily tasks before you go home. **Before surgery, it is important to make arrangements to have someone pick you up from the hospital on the morning of your discharge home.**

Because you will be moving less for some time after surgery, keeping your lungs clear is very important. **You should start doing deep breathing and coughing exercises as soon as you can after surgery.**

Deep breathing after surgery:

- › keeps your lungs fully expanded (made bigger)
- › clears mucus from your lungs and throat
- › lowers your chance of getting a chest infection (pneumonia)

**You should try to do the following deep breathing and coughing exercises every hour while you are awake.**

### Deep breathing and coughing

1. While sitting or lying down, place both hands high on your stomach below your rib cage.
2. Breathe in as deeply as you can. Feel your stomach push out against your hands.
3. Hold briefly for 2 to 3 seconds.
4. Breathe out slowly through your open mouth.
5. Repeat 3 to 4 times.
6. Give a strong cough – **clearing your throat is not enough.**
7. Follow this with 2 to 3 more deep breaths.
8. Do this exercise every hour while you are awake.

# What will happen during surgery and recovery?

## Foot and ankle pumping

Another way to help prevent complications after surgery is to pump your feet and ankles. This helps the blood flow in your legs and helps prevent swelling and blood clots. Foot and ankle pumping should be done every hour while you are awake.



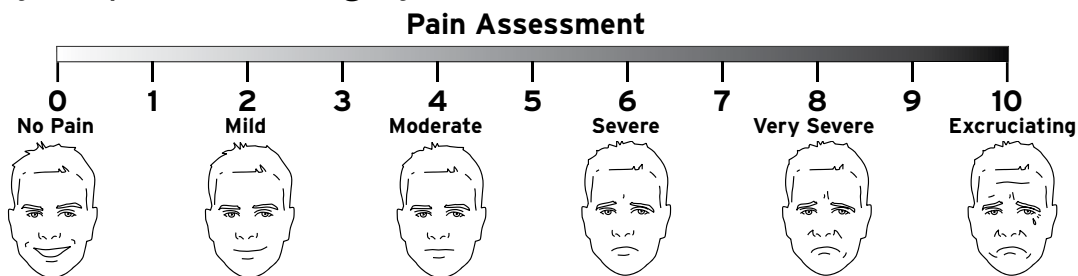
1. Relax your legs.
2. Gently point your toes towards the ceiling.
3. Then gently point your toes towards the bottom of the bed.
4. Do this exercise for 1 to 2 minutes every hour while you are awake.

## After surgery

- Most people can put their full weight on their leg, as tolerated (weight you can comfortably put on your leg when standing or walking).
- Sometimes the surgeon gives a restriction on your weight bearing. Your care team will review this with you before standing/walking.
- **Ask your physiotherapist or nurse if you do not know how much weight you can put on your leg.**
- Staff will help and encourage you to stand, walk, and go to the bathroom after surgery using your walker.

## Pain control

- Your nurse will ask you to use the pain scale below or a similar scale to describe your pain after surgery.



- **Our goal is to keep your pain around 3 or 4 or lower after surgery.**

# What will happen during surgery and recovery?

- As your pain starts getting to level 3 or 4, call for your nurse. Pain medication can usually be given every 3 to 4 hours, and will **only be given if you ask for it**. At home you will control your own medication, so make sure you understand how to do this before you leave the hospital. **Please ask your nursing team if you have any questions**. People who ask for and get pain medication do better during their recovery. If you are in pain, it will be harder to get moving. Pain can also make you feel nervous or upset and afraid to do the exercises you need to recover. It is important to ask for medication when your pain increases.
- It can also help to have pain medication about 30 to 60 minutes before your exercises.
- It is **NOT** a good idea to tough it out after surgery and refuse medications to help your pain.

## What type of pain medication will I get?

Please refer to page 11 for a reminder of the different types of pain medication.

## What are the side effects of pain medications?

Make sure to tell your nurse if you have any of these side effects:

- › nausea
- › vomiting (throwing up)
- › drowsiness
- › itchiness
- › constipation

## Constipation

You may have constipation after surgery. This happens because of a change in foods you are eating, being less active, and taking pain medication.

### To help with constipation:

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

Your nurse may give you a laxative (medication to help you have a bowel movement/poop) and/or stool softener. You may need to keep taking these medications at home. If you have constipation at home, talk with your primary health care provider or pharmacist as soon as you can. **Constipation can be serious, so do not ignore your symptoms.**

# What will happen during surgery and recovery?

## Bladder function

Some people have trouble urinating (peeing) after surgery. Please tell your nurse right away if you are having problems, as you may need a temporary catheter (hollow tube to drain your urine).

## Blood clots

A very small number of people get blood clots after surgery. Blood clots usually develop in the deep veins in the legs (Deep Vein Thrombosis or DVT). People who are not active or who have problems with their circulation are more likely to develop a blood clot.

### Symptoms of a DVT:

- › an increase in pain, swelling, or tenderness in the calf or thigh of **either leg**, or in the groin area
- › heat and redness in the lower leg

**If you have any of the signs or symptoms of a DVT, go to the nearest Emergency Department right away.**

In some cases, a blood clot may travel from your leg to your lung, cutting off the blood flow to your lungs. This is known as **Pulmonary Embolism (PE) and is a medical emergency**. PE is rare, but you should know the signs just in case.

### Symptoms of a PE:

- › cough (that you did not have before surgery)
- › shortness of breath (worse than before surgery)
- › wheezing (that you did not have before surgery)
- › coughing up blood
- › fever
- › very bad sweating (while resting)
- › confusion (that you did not have before surgery)
- › sharp, knife-like pain in the chest or back when you breathe in (worse than before surgery)

**A pulmonary embolism can be life-threatening. If you are in the hospital, tell the nurse or doctor right away if you have any of these signs or symptoms. If you are at home, call 911 right away.**



# What will happen during surgery and recovery?

## **Blood-thinning medication (blood thinner)**

This medication helps stop blood clots from forming. Your surgeon will decide if this medication is right for you, and prescribe the type and dose that is best for you. It is important to take this medication as prescribed until it is finished. You will get blood-thinning medication by needle or in pill form while you are in the hospital after your surgery, and after you return home. When you return home, you will give yourself this medication. **Your nurse will teach you how to give yourself this medication.**

## **Swelling**

It is normal to have some swelling in your leg after surgery, sometimes as far down as your foot. This may get worse as you become more active. Swelling may make it harder to move, make your pain worse, and lower your range of motion.

To help lower swelling:

- Do foot and ankle pumping exercises (see page 41).
- While lying down, place pillows lengthwise under your calf (operated leg) to raise it up. Be sure to follow your **Knee Guidelines** (see page 4).
- Do short periods of activity. For example, walk a few steps, rest, then repeat.
- Use ice (see page 11).

## **Bruising**

You will likely have some bruising after surgery at the site of your surgery and/or on your operated leg.

## **Anemia (low blood count)**

If you lost blood during surgery, you may have anemia after surgery. Tell your nurse if you have any of these symptoms of anemia while in hospital:

- › feeling faint, weak, dizzy, or tired
- › shortness of breath
- › fast heartbeat
- › If you have any of these symptoms once you have returned home, call your primary health care provider. You may need an iron supplement.

# What will happen during surgery and recovery?

It is normal to have some redness and clear drainage from your incision site. Watch for these signs of infection:

- › redness around the incision that spreads
- › green, yellow, or smelly pus coming from the incision site. It is common for fluids to drain for 3 to 5 days after surgery. Then this should stop and your incision should stay dry.
- › increased pain or swelling around the incision and surrounding area
- › temperature over 38° C (100.4° F). Signs of a fever may include chills, sweating, and headaches.

Foot and ankle pumping (see page 41), walking regularly, and taking blood-thinning medications as prescribed by your surgeon help to lower the risk of complications.

## Activity guidelines after surgery

- Move your knee often.
- Avoid putting a pillow directly under your knee.
- If needed, raise your leg by putting a pillow(s) lengthwise under your leg, making sure your knee is straight.
- Avoid twisting your knee.

# Activity guidelines after surgery

## To get in bed:

1. Using your walking aid, back up until you feel the bed behind you. Slide your operated leg forward and sit on the edge of the bed.
2. Move your walking aid out of the way.
3. Using your arms for support, slide your bottom across the bed, and bring both legs up onto the bed (you may use your arms to lift your operated leg onto the bed, if needed. Have someone help lift your leg into bed or use your non-operated leg, if needed).



## Lying down

If you are resting and/or sleeping in your bed, it is best to lie on your back. Try to keep your knees and toes pointing up. If you need to lie on your side for comfort, you should lie on your non-operated side and put 1 or 2 pillows between your knees. This will help stop your operated leg from falling forward. After discharge from hospital, you may begin to tolerate other positions (**remember to keep following any Knee Guidelines (page 4) your surgeon has given you**).



# Activity guidelines after surgery

## To get out of bed:

1. Make sure that you can reach your walking aid.
2. Bend your non-operated leg and, using your elbows for support, slide your bottom to bring yourself to the edge of the bed.
3. From a semi-lying position, push up on your elbows and hands.
4. Slide your hips and legs over to the edge of the bed.
5. Swing your body around to sit up.

## To sit in a chair:

1. Back up until you feel the edge of the chair touching the back of your leg.
2. Reach for the arms of the chair behind you, and hold onto the armrests.
3. Lower yourself to a sitting position slowly and gently.
4. Reposition yourself to the back of the chair.

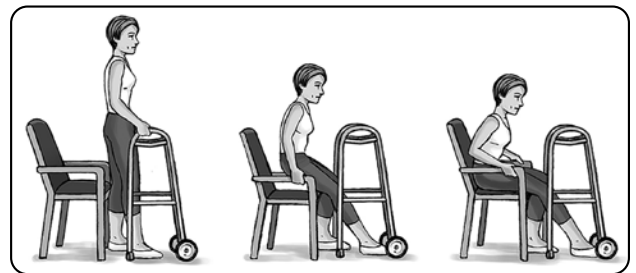
## Standing up

### To stand up from a chair:

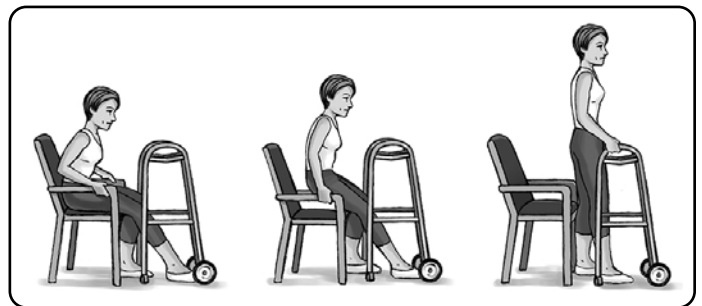
1. Move to the edge of the chair.
2. Bend your legs under you to hold your body weight.
3. Push down with your hands on the armrests, and raise your body to stand up. Put most of your weight on your non-operated leg.
4. Once you have your balance, use your walking aid.



6. Stand up, using your non-operated leg for support.
7. Once you have your balance, use your walking aid.



5. Bend the knee on your operated leg to a comfortable position.



# Activity guidelines after surgery

## Sitting down

Your chair should have a firm seat and armrests. When sitting, having your hips higher than your knees may make it easier to stand up. You can make the seat higher by adding a firm cushion. **Do not sit in low or soft chairs.**

## Walking

- On the day of surgery, depending on how you are feeling, you will be asked to sit at the edge of the bed, walk a few steps to a bedside chair, and even take a short walk.
- Make sure a nurse or physiotherapist is with you the first few times you get out of bed. You may feel weak or dizzy. Tell the nurse or physiotherapist if you feel weak or dizzy. The physiotherapist will make sure you are walking correctly. They will also tell you when it is safe for you to walk by yourself using your walking aid.
- Take short walks as often as you can, using your walking aid. Try to walk longer distances as you are able.

To measure the proper height for your walker and/or cane the handle of the walker and/or cane should be at your wrist when you are standing up straight, and your arm is hanging by your side.



### Walking with a 2-wheeled walker:

1. Move your walker ahead first.
2. Step forward with your operated leg first, then your non-operated leg second.
3. Bend your operated knee as you are walking.
4. When changing direction, turn toward your non-operated side, if possible. Pick up your feet to take small steps. In between taking steps, pick up and reposition the walker as you turn. **Do not twist your body.**

### Walking with a cane:

1. You will use a walker at first, and then progress to a cane as recommended by your physiotherapist. Place the cane in your hand on the side of your non-operated leg.
2. Moving your cane with you, step forward with your operated leg.
3. Follow with your non-operated leg.

# Activity guidelines after surgery

## How do I climb stairs?

### To climb stairs with a handrail and a cane:

1. Hold the handrail with one hand and the cane in your other hand.
2. Stand close to the first stair.
3. Step up onto the first stair with your non-operated leg.
4. Straighten your non-operated leg, and bring the cane and your operated leg up together so that both feet are on the same stair.
5. Use the handrail and cane for support.
6. Repeat steps 1 to 5 for each stair.



### To walk down stairs with a handrail and a cane:

1. Hold the handrail with one hand and the cane in your other hand.
2. Stand close to the first stair, facing down the stairs.
3. Step down onto the first stair with your cane, followed by your operated leg.
4. Then step down onto the same stair with your non-operated leg.
5. Use the handrail and cane for support.
6. Repeat steps 1 to 5 for each stair.



**Remember:** Your non-operated leg goes up first and your operated goes down first.

**Even if you do not have stairs at home, you should learn how to climb stairs safely.** Your physiotherapist will practice climbing stairs with you before you leave the hospital.

# Activity guidelines after surgery

If you were not using any dressing aides to get dressed before your surgery, try getting dressed without them. This will help you bend your operated knee and strengthen the muscles around it. If you cannot get dressed without aides, the following directions may be helpful. Remember to keep bending at the knee as much as you can while getting dressed.

## To put on your underwear and/or pants:

1. Sit on a firm chair or at the edge of your bed.
2. Lower your clothing to the floor. If you try and cannot reach down to pick up your clothes, using a reacher/grabber may help.
3. Dress your operated leg first, then your non-operated leg.
4. Pull your pants up past your knees. Make sure that your feet come completely through the pant legs.
5. Stand up and pull your pants up the rest of the way. Use your walking aid for support.

## To take off your pants:

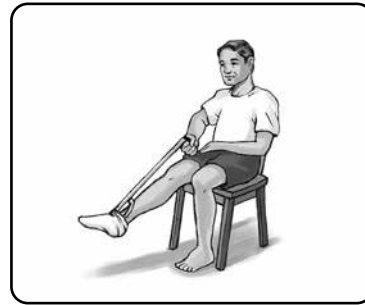
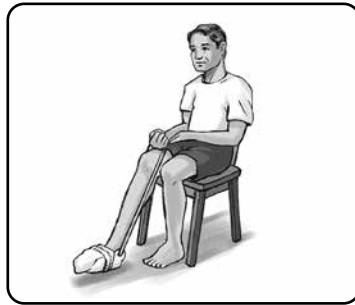
1. Stand in front of a firm chair or at the edge of your bed. Hold on to your walking aid with one hand.
2. Use your other hand to start lowering your pants to the floor.
3. Lower your pants enough that you can sit on the chair or on the edge of the bed without sitting on your pants.
4. Use the reacher to lower your pants the rest of the way, if needed. Be sure to undress your non-operated leg first, then your operated leg.



# Activity guidelines after surgery

**To put on your socks using a sock aid (loose fitting above-ankle socks work best):**

1. Put your sock on the sock aid. It works best if you pull the sock on tight so that the toe of the sock is not hanging over the edge of the sock aid.
2. Lower your sock aid to the floor.
3. Slide your foot into the sock aid and pull the sock aid up.
4. If the sock does not come up all the way, you can use a reacher to help pull the sock up.
5. You can use baby powder or cornstarch to help you slide your socks on.



**To take off your socks:**

You can take off your socks using a reacher or a long-handled shoe horn (be careful not to scratch your skin).

**Using a long-handled shoe horn**

Use slip-on shoes with an enclosed heel (or shoes with elastic laces) that are a half-size bigger than you usually wear. This will leave room for possible swelling after surgery.



**To put on your shoes:**

1. Position your shoe using a long-handled shoe horn.
2. Slide your foot into your shoe using the shoe horn.

**To take off your shoes:**

Use a long-handled shoe horn to slip off your shoe.



# Activity guidelines after surgery

## What exercises should I do after surgery?

Doing exercises helps to promote good circulation, increase muscle strength, and prevent joint stiffness and blood clots. Daily exercises will help you recover faster and feel better so you can get back to your usual activities. Your physiotherapist will show you how to do your exercises. Be sure to follow the **Knee Guidelines (page 4)**.

**Do each exercise 10 times, 3 times a day (see page 41). At your follow-up appointments, talk with your health care team about how you should progress your exercises.**

**What are your questions?**

**Please ask. We are here to help you.**

# What can I expect at home?

## Before you leave the hospital

- Make sure you understand how to care for your incision (see page 35).
- Make sure you have prescriptions for any new medications.
- Make sure you know about follow-up appointments with your surgeon, and any other appointments you will need as part of your follow-up care.

## Follow-up appointments

- **When you get home, make sure you review any paperwork you were given in the hospital.**
- Your first follow-up appointment with your surgeon will usually be between 2 to 6 weeks after your surgery.
- **Write down any questions you have for your surgeon and bring them with you.**
- It is a good idea to have a family member or friend come with you to your first follow-up appointment to listen and take notes.
- You can expect to see your surgeon over the next year.

## When can I drive?

- **You should not return to driving for at least 6 weeks after your surgery.**
- You should not drive any time you are taking medications that can affect your thinking, reaction time, and make you tired.
- Please check with your primary health care provider, surgeon, or other member of your health care team if you have any questions about returning to driving.
- You can ride as a passenger for short distances to and from appointments and other activities. Avoid long drives. **Move your leg often and do foot and ankle pumping exercises while riding in a vehicle.**
- Depending on the height of the vehicle, it may be easier to get in from a curb or from street level. **Avoid vehicles with low seats.**

# What can I expect at home?

## Getting in and out of vehicles

To get into a vehicle:



1. Have your driver or support person fully open the passenger door, move the bottom of the seat back as far as it will go, and recline (lean back) the backrest. **Tip: If it helps, place a cushion on the seat to make it higher. Placing a plastic bag on the seat will help you slide onto the seat more easily.**
2. With the car door fully open, use your walking aid to back up to the vehicle until you feel the car against your leg. Put your right hand on the frame of the vehicle. Put your left hand on the dashboard and slide your operated leg forward. If you cannot easily reach the dashboard with your left hand, roll down the window and hold onto the door frame instead. Then slowly lower yourself onto the seat. You are now sideways on the seat, still facing out of the side of the car.
3. Lean back and slide your bottom across the seat.
4. Turn into the vehicle, **keeping your shoulders, knees, and hips in line with each other.** Your driver or support person may help you lift your operated leg into the vehicle, if needed. **Do not cross your legs. Tip: Make sure the seat is pushed back so that your operated leg can clear the doorway.**
5. Buckle your seatbelt and the driver or your support person can close the door for you.

Try to limit car rides in the first 6 weeks (recovery phase) to essential travel only.

# What can I expect at home?

## To get out of a vehicle:

1. Have your driver or support person fully open the door. Unbuckle your seatbelt. Recline the backrest.
2. Depending on the height of the vehicle, it may be easier to get out at the curb or street level. Avoid vehicles with low seats. Turn slowly, placing your feet on the ground and sliding your buttocks forward to the edge of the seat. Your driver or support person may help you lift your operated leg out of the vehicle, if needed.
3. Put your right hand on the frame of the vehicle. Put your left hand on the dashboard. If you cannot easily reach the dashboard with your left hand, roll down the window and hold onto the door frame instead (support person can steady door). Stand up, using your arms for support — remember your weight bearing restrictions (if you have them) for your operated leg.
4. Have your driver place your walking aid in front of you.

## How do I manage pain at home?

Your pain should get better over the next 6 to 12 weeks. If pain is preventing you from taking care of yourself, sleeping, and/or exercising, talk with your primary health care provider, prehab clinic team, physiotherapist, or pharmacist.

Remember to:

- Take your pain medication as directed.
- Pace yourself and take your time doing things, especially in the first few days after surgery. Be sure to rest and get enough sleep.
- Wrap your joint in a towel and apply ice for up to 15 to 20 minutes. Repeat every 2 hours (or once your skin has returned to normal), as needed.
- Elevate (raise) your leg above the level of your heart while lying down at least a few times each day. This will help with swelling.
- Relax your body. Try breathing exercises and progressive muscle relaxation (tightening and relaxing each part of your body, starting with your toes and working up to your neck).
- **Think positively.** You will feel better over time. Take care of yourself. Staying positive will help you get back to your usual activities sooner. **If your pain gets worse over time or if you have pain in a new part of your body, call your primary health care provider right away.**



# What can I expect at home?

## How do I care for my incision?

While you are in the hospital, your nurse will teach you how to care for your incision at home. Your incision will be closed with stitches, staples, Steri-Strips™, or a combination of these.

- Do not rub creams or ointments on your incision until it has completely healed.
- Do not pick at any dry areas, scabs, or blisters at or around the incision site.
- You may have a special bandage that will stay on until you see your surgeon again.

**It is normal to have some redness and clear drainage from your incision site. Watch for these signs of infection:**

- › redness around the incision that spreads
- › green, yellow, or smelly pus coming from the incision site. It is common for fluids to drain for 3 to 5 days after surgery. Then, this should stop and your incision should stay dry.
- › increased pain or swelling around the incision and surrounding area
- › temperature over 38° C (100.4° F). Signs of a fever may include chills, sweating, and headaches.

**If you notice any of these symptoms, call your surgeon's office (see page 40) right away.** If you are not able to reach your surgeon, call your primary health care provider or go to the nearest Emergency Department.

## When can I have a shower or bath?

- Ask your health care team at discharge when you can take a shower, bath, or sponge bath after your surgery. **Write the instructions here so you remember:**

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- Use your recommended bathtub equipment and/or walk-in shower equipment (see page 13) to help you get in and out of the shower.

# What can I expect at home?

## Work

When you can go back to work depends on what type of job you have, as well as your work environment. **Most people take 8 to 12 weeks (2 to 3 months) off work after knee replacement surgery.** You may need to change how you work and your work environment to be able to follow **Knee Guidelines**. Ask your surgeon when you can go back to work and if there are any guidelines you need to follow.

## Travel

Do not travel by air until you have met with your surgeon after your surgery. Your surgeon will tell you if you are ready to fly.

When you are ready, make sure to plan ahead to give yourself extra time to take regular breaks to walk and stretch.

For flights longer than 90 minutes (1½ hours), try to get an aisle seat so that you can get up and walk around during the flight. When you are on the plane, do foot and ankle pumping exercises every 30 minutes to keep the blood moving and help lower the risk of blood clots. You may be advised to wear compression stockings to lower the risk more.

## Staying active (sports and leisure)

When you can go back to sports and leisure activities depends on your physical condition and the difficulty of the activity. High impact activities (like running, jumping) may not be recommended following your surgery. Low impact activities (like walking, biking, dancing, swimming) are generally encouraged. Ask your health care team if you have any questions.

## Sexual activity

Most people are able to go back to sexual activity after knee replacement surgery. In fact, many people who had stiffness and pain during sex before surgery find that they have less pain and more mobility after surgery.

**It is generally recommended to wait about 6 to 8 weeks after surgery before having sex. This gives your incision and muscles time to properly heal.**

When choosing a sexual position, let pain be your guide. Pick positions that feel the most comfortable and pain-free. Remember **Knee Guidelines** (if you have them) — if they do not work with your usual positions, you may need to try different positions until you are fully recovered.

# Hospital information (CBRH)

Location
Cape Breton Regional Hospital 1482 George Street Sydney, NS B1P 1P3 Switchboard: 902-567-8000

Parking
Parking is available on-site, with a fee to be paid at time of exit. Please check with hospital staff or the hospital website ( <a href="http://www.nshealth.ca/locations">www.nshealth.ca/locations</a> ) for current prices at the time you are admitted.

On-site food
Patients are encouraged to use the “Dial for Dinner” service. A menu and phone number will be provided to you, and you can call to order your meals in advance. To opt out of this service, please talk to your nurse.
<b>Restaurants</b> <ul style="list-style-type: none"><li>› Cafeteria basement floor (Level 1), weekday hours: 7:30 a.m. to 4 p.m.*</li><li>› Subway®, 1st floor of HealthPark, weekday hours: 7:30 a.m. to 8 p.m.*</li><li>› Tim Horton’s, 1st floor of HealthPark, weekday hours: 7 a.m. to 4 p.m.</li></ul> *Weekend hours may vary.



# Hospital information (CBRH)

## Patient accommodations

### Patient accommodations

The hospital offers 3 types of accommodations for patients:

- › standard ward: 4 beds per room
- › semi-private: 2 beds per room
- › private: 1 bed per room

It is not always possible to give you the room you ask for. However, we will try to transfer you to your preferred room as soon as it becomes available. There is a daily charge for semi-private and private rooms. If you have private insurance, please check with your insurance provider whether this is covered.

### Equipment

You must bring your 2-wheeled walker and other equipment (see page 1) to the hospital. Please make sure that any recommended equipment (such as a cane, 2-wheeled walker) is available in the vehicle that will be taking you home.

### Exercise therapy

Group and/or individual therapy takes place in the morning and afternoon.\*

\*Timing of therapy may vary by site.

### Visiting hours

- Patients and their loved ones and/or families are respected as members of the health care team. You have an important role in helping to make sure there is quality of care and safety.
- Family and/or primary support people are generally welcome 24 hours a day, to make sure you have the support you need, when you need it, from the people who are most important to you.
- We ask that you name up to 2 people who will support you. We also ask that you let our team know how you would like your support people to be involved in your care and decision-making.
- Please talk to your health care team about your family and/or primary support people.
- Please note that visitor guidelines may change at times for different reasons. Our health care team will advise you if guidelines change.

# Hospital information (CBRH)

## Community supports

- You can find information on community resources in your area by calling 211 or visiting <http://ns.211.ca>
- Continuing Care
  - › Phone (toll-free): 1-800-225-7225

## Getting equipment

You can rent or buy equipment by checking with your home pharmacy. Please call 211 or refer to the phone book, websites, etc. for more information.

Home health care stores and pharmacies often carry equipment for loan or purchase. Please contact these places directly to ask about prices and availability. Note: a prescription from a health care provider may be needed in order to submit these costs to an insurance company.

<b>Canadian Red Cross - Sydney*</b>	<b>Canadian Red Cross - Antigonish</b>
1140 Upper Prince Street Sydney, NS B1P 5P6 Phone: 902-564-4114 Fax: 902-539-4349 Weekdays: 8:30 a.m. to 4:30 p.m.	Unit 2, 36 Market Street Antigonish, NS B2G 3B4 Phone: 902-863-8222 Fax: 902-863-1701

\*Referral from a health care professional is needed.

## Contact information

Dr. D. Brien	902-539-5954
Dr. F. Dodd	902-567-0509
Dr. C. Hamilton	902-270-5878
Dr. M. O'Neill	902-270-3778

Sydney Orthopedic Assessment Clinic (OAC)/ Hip & Knee Clinic/Prehabilitation Suite 101, 200 Churchill Drive Membertou, NS B1S 0H5	902-563-8512 (OAC/Hip & Knee Clinic)  902-563-8513 (Prehabilitation)
OAC/Prehab Registered Nurse (RN)	902-563-8518
OAC/Prehab Physiotherapist (PT)	902-563-8515
OAC/ Prehab Occupational Therapist (OT)	902-563-8516
OAC/ Prehab Dietitian	902-563-8514
Pre-admission Clinic	902-567-7865
Inverness OAC/Hip & Knee Clinic/Prehabilitation 39 James Street Inverness, NS B0E 1N0	902-258-1955 RN or OT: 902-258-1953 PT or DT: 902-258-1952
3A Orthopedic floor	902-567-7818
Nutrition & Food Services	902-567-7725
Physiotherapy (CBRH)	902-567-7748
Social Work (CBRH)	902-567-7864
Occupational Therapy (CBRH)	902-567-7748

# Exercises

**Do not do any exercise that is too painful.**

Do each exercise 10 times, 3 times a day to start. Your physiotherapist will talk with you about how you should increase your exercises. Do these exercises before and after surgery.

**Make sure you are not holding your breath during these exercises.**

## Foot and ankle pumping

1. Relax your legs.
2. Gently pull your toes towards the ceiling.
3. Then gently point your toes towards the bottom of the bed.
4. Do this exercise for 1 to 2 minutes every hour while you are awake.



## Quad sets

1. Lie on your back with your non-operated leg bent.
2. Press the back of your knee of your operated leg into the bed by tightening the muscles on the front of your thigh.
3. Hold for 5 seconds.
4. Relax.



**Coach's note:** Look and feel for the muscle above your knee to contract (squeeze together). Done correctly, your heel should come up slightly off the bed.

# Exercises

## Gluteal sets

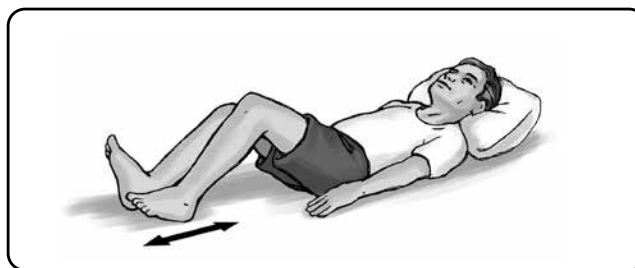
1. Squeeze your buttocks (bum) together.
2. Hold for 5 seconds.
3. Relax.

**Coach's note:** Place your hands on your right and left gluteal (buttocks) area and feel for equal muscle contractions.



## Hip and knee flexion heel slides

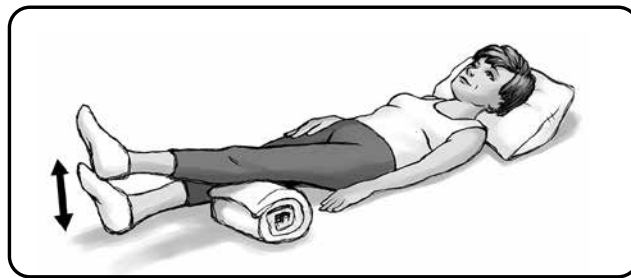
1. Lie on your back with your legs straight.
2. Bend the knee of your operated leg and slide your heel up towards your buttocks. You may use a strap around your foot to help.
3. Straighten your leg and relax.



# Exercises

## Short arc quads

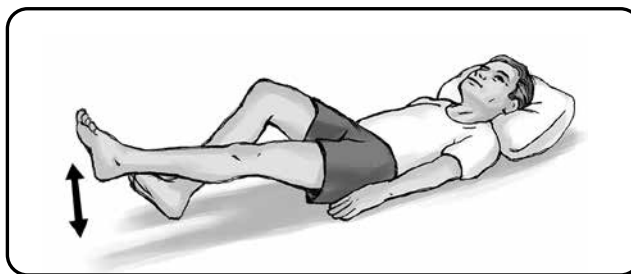
1. Lie on your back with your legs straight.
2. Place a rolled towel under the knee of your operated leg.
3. Lift the foot of your operated leg, straightening your knee as far as possible. Do not lift your thigh off of the rolled towel.
4. Bend your knee, lower your foot, and relax.
5. Remove the rolled towel from under your leg when you are finished.



## Straight leg raise

1. Lie on your back with your non-operated knee bent and foot flat.
2. Tighten quad on your operated leg and lift your leg 12 inches from the floor.
3. Keep knee straight and toes pointed toward your head.

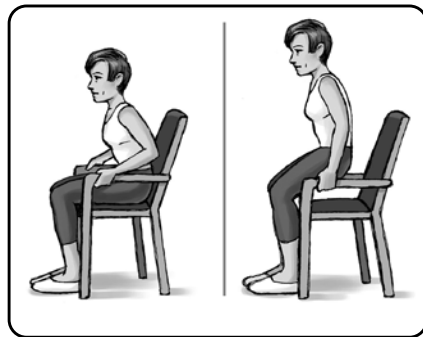
**Coach's note:** If you are able, you can add a small ankle weight to your leg to increase your strength before surgery.



# Exercises

## Armchair pushups

1. Sit in a sturdy chair with armrests.
2. Keeping your feet flat on the floor, slide to the front of the seat.
3. Hold onto the armrests.
4. Straighten your arms, lifting your buttocks up from the seat as far as possible. Use your legs to help, if needed, keeping in mind your weight bearing restrictions for your operated leg. Do not hold your breath or strain too hard.
5. Over time, work towards using only your arms and your non-operated leg.
6. Bend your arms and lower your buttocks back onto the chair. Relax.



## Seated knee flexion

1. Sitting in a straight-back chair, bend operated leg as far as possible under chair (can use opposite foot to help).
2. When maximum bend is reached, plant foot and slide hips forward further bending knee.
3. Hold for 20 to 30 seconds.

**Coach's note:** Each time bend until a stretch is felt and then a little more if possible. You can use your non-operated leg to apply some overpressure to increase the stretch in your operated leg. Be sure your hips stay flat on the chair.



# Exercises

## Knee flexion (knee bending)

1. Hold onto the back of a chair or a countertop.
2. Stand up straight.
3. Bend the knee of your operated leg, bringing your heel up to your buttocks so you are standing on your non-operated leg. Do not lean forward or bend at the waist.
4. You should feel the muscles on the back of your thigh working, and the muscles on the front of your thigh stretching.
5. Relax.



## Knee extension (back of knee stretch) while lying down

1. Lie on your back with your non-operated knee bent and foot flat.
2. Place a large juice can rolled in a towel under the heel of your operated leg.
3. Push your knee down into the bed.
4. Hold for 10 to 20 seconds.
5. Relax.



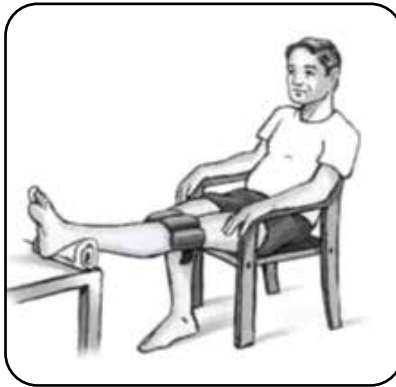


# Exercises

## **Knee extension (back of knee stretch) while sitting**

1. Sitting in a straight-back chair, prop your foot on a chair or stool. You may add a rolled towel under your ankle if that is more comfortable.
2. Gently push your knee down by tightening your muscles on the top of your thigh.
3. Hold for 10 to 20 seconds.
4. Relax.

**Important: Do not add any weight to your knee unless instructed by your surgeon or therapist.**



## **Seated knee extension (straightening your knee)**

1. Sit back in a chair. Make sure not to lean forward.
2. Straighten your leg as far as possible by kicking it out.
3. Hold for 5 seconds then lower slowly. Then bring your heel as far back under the chair as possible.
4. Relax and repeat 10 times.





**Looking for more health information?**

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Contact your local public library for books, videos, magazines, and other resources.

For more information, go to <http://library.novascotia.ca>

Connect with a registered nurse in Nova Scotia any time: call 811 or visit <https://811.novascotia.ca>

Learn about other programs and services in your community: call 211 or visit <http://ns.211.ca>

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