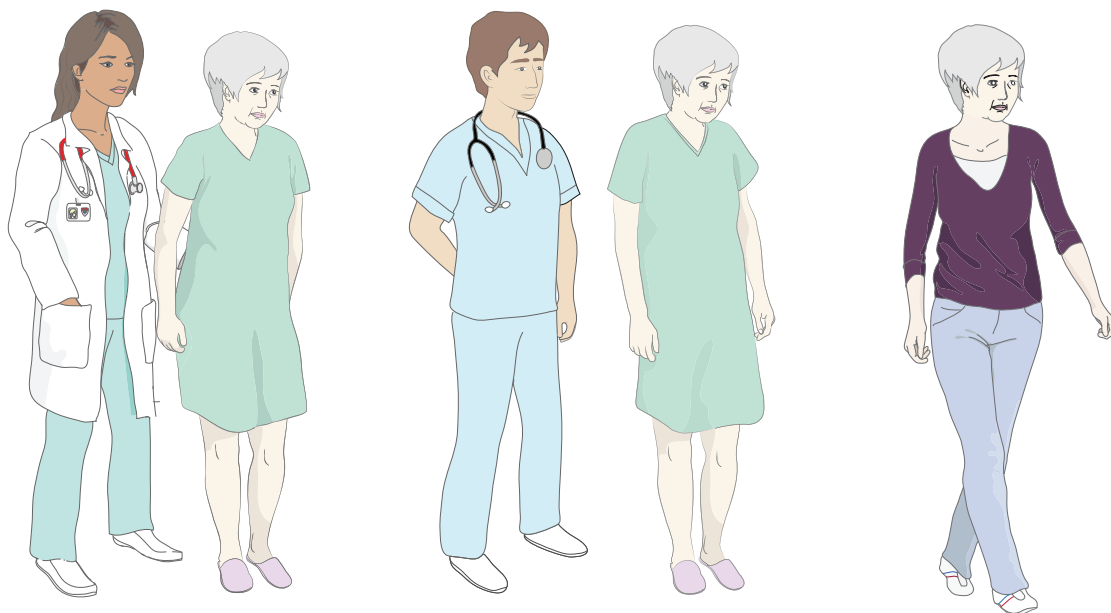


# A Guide to Lower Limb Bypass Surgery



This booklet will help you understand and prepare for your surgery.

***If you were given this booklet in your Surgeon's clinic,  
please bring it with you to your Pre-Admission  
Clinic appointment and make sure to bring it  
with you on the day of your surgery.***



Eastern  
Health

This booklet was developed by the Eastern Health Enhanced Recovery After Surgery Working Group.

We would like to thank the McGill University Health Centre Patient Education Office for their support throughout the development of this document, including the design, layout and creation of all the images.

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## Important

Information provided by this booklet is for educational purposes. It is not intended to replace the advice or instruction of a professional healthcare practitioner, or to substitute medical care. Contact a qualified healthcare practitioner if you have any questions concerning your care.



This material is also available through the  
**MUHC Patient Education Office** website:  
[www.muhcpatienteducation.ca](http://www.muhcpatienteducation.ca)

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McGill University  
Health Centre

**Office d'éducation des patients**  
**Patient Education Office**



Enhanced Recovery Society of Canada  
Société de réhabilitation rapide du Canada

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# What is a Care Pathway?

When you are admitted to the hospital for Lower Limb Bypass Surgery, you will be part of a fast recovery program called a **Clinical Care Pathway**. The goal of this program is to help you recover quickly and safely. Your health care team worked together with former patients to create this pathway.

This booklet will:

- Help you understand and prepare for your surgery.
- Explain how you can play an active part in your recovery.
- Help you set daily goals while you are recovering.

Research shows that you will recover faster if you do the things explained in this booklet. There are instructions about your diet, physical activity, and controlling your pain. These things will help you to feel better faster and go home sooner.

Use this booklet as a guide during your hospital stay. Hospital staff may refer to it as you heal, and review it with you before you go home.

Having surgery can be stressful for patients and their families. The good news is that you are not alone. We will support you each step of the way. Please ask us if you have questions about your care.

## Your Eastern Health Surgical Team

If you do not speak English, please bring someone to translate for you.

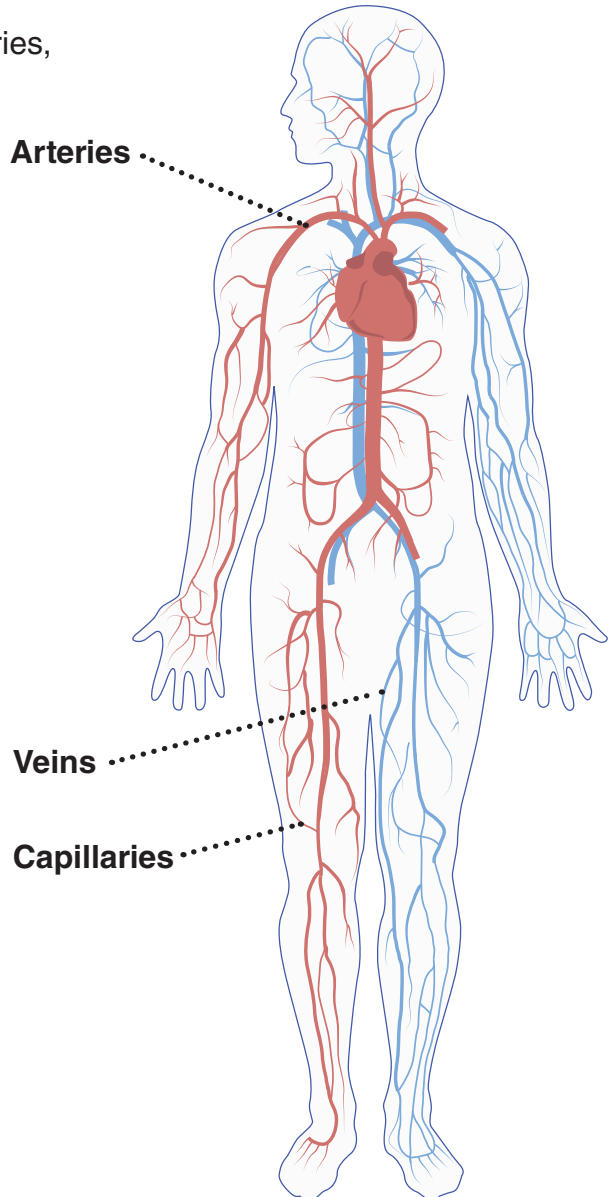


# What is the Circulatory System?

The circulatory system is responsible for carrying blood throughout your body.

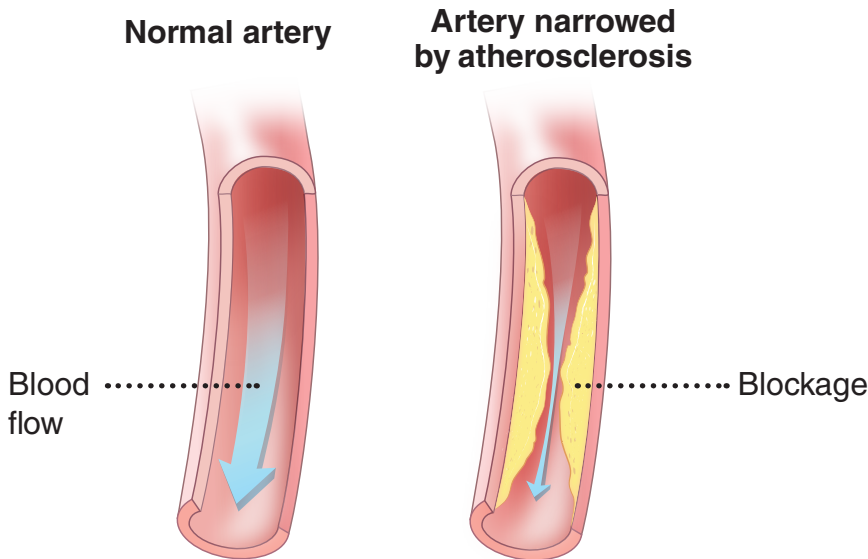
The circulatory system consists of arteries, veins and capillaries:

- The **arteries** carry blood rich in oxygen from your heart to all parts of your body. There are many arteries, each supplying a specific part of your body.
- **Veins** return blood from all parts of the body to the lungs so that blood can be loaded with oxygen.
- **Capillaries** are tiny blood vessels that connect the arteries and veins.



# What is a Blockage?

The main cause of a blockage is **atherosclerosis** (hardening of the arteries). This usually gets worse with age, although it may happen at any age.



We cannot always predict who will develop atherosclerosis. However, there are certain factors that increase your risk.

## Risk factors that can be changed or controlled:

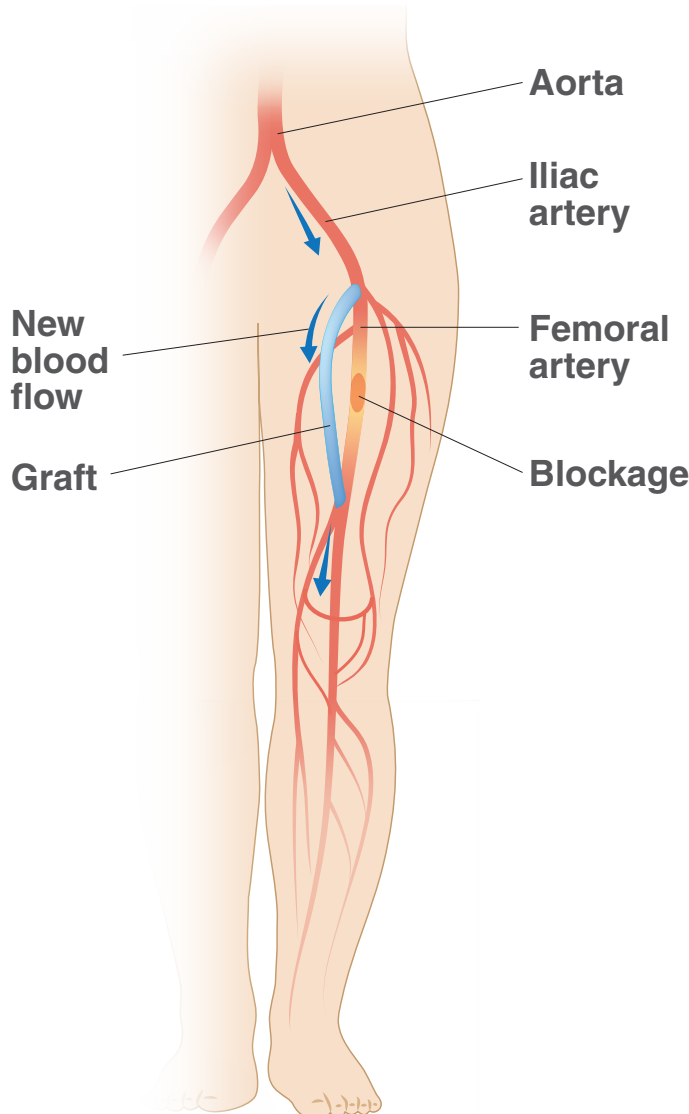
- Smoking
- High blood pressure
- High levels of bad cholesterol
- Being overweight
- Stress

## Risk factors that cannot be changed:

- Age
- Family history of atherosclerosis

# What is Lower Limb Bypass Surgery?

A lower limb bypass surgery is necessary when there is a blockage in the artery. The surgeon will use one of your veins or a man-made graft to “bypass” the blockage. The surgery does not cure the disease or remove the blockage. Think of the bypass as a road detour.



# Preparing for Surgery

## Be active

Exercise helps your body be as fit as possible and to keep your weight under control. If you are already active, keep up the good work. If you are not, start by adding activity into your day. It does not need to be hard to make a difference. Many people with blockages experience leg cramps, also known as **claudication pain**, which can make exercise hard.



The pain from these cramps can be sharp, dull, aching, throbbing, or burning. Although exercise may be painful, it is important that you know that pain from doing exercise will not cause any damage to your legs. Begin by walking slowly on flat surfaces and take breaks if you have pain. Aim to walk for 15-20 mins, with as many breaks as needed. A shopping mall is a great place to start because there are lots of places to sit.

## Stop smoking

We strongly suggest you stop smoking completely before your surgery because smoking makes it very difficult to heal after surgery. Doctors can help you stop smoking by prescribing medication. See page 30 to learn more. Discuss these options with your doctor.



## Restrict alcohol

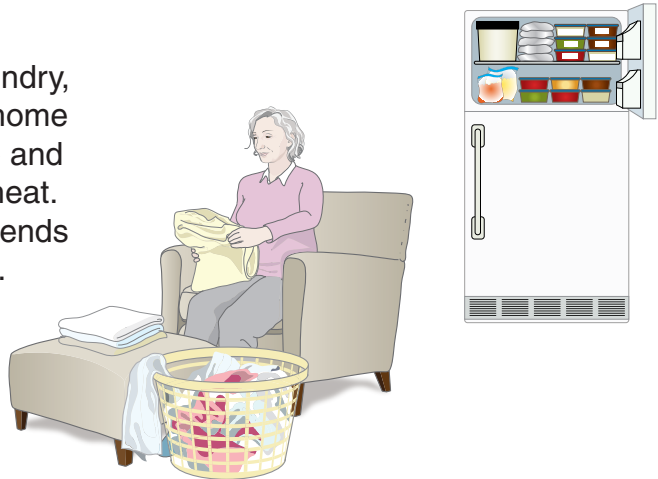
Decrease your alcohol use before surgery. Do not drink **ANY** alcohol for 24 hours before your surgery. Alcohol can change the way some medications work. Please tell us if you need help decreasing your alcohol use before surgery.



# Preparing for Surgery

## Plan ahead

You may need help with meals, laundry, bathing or cleaning, when you go home from the hospital. Stock your fridge and freezer with food that is easy to reheat. Make plans with your family and friends so you will have the help you need.



## Arrange transportation

Plan to go home from the hospital on Day 4 or 5 after surgery. Tell your nurse if you have any concerns about going home. Remember to arrange a ride, since you will not be able to drive.

If you came into the hospital by road or air ambulance as an emergency, you will need to arrange for your own transportation home. If you need help to arrange this, please let your nurse know as soon as possible.



# Pre-Admission Clinic Visit

When you visit the Pre-Admission Clinic, you may:

- Have blood tests, a chest x-ray, or an ECG (electrocardiogram).
- Meet with a nurse who will explain how to get ready for surgery and what to expect while you are in the hospital. The nurse will ask you about your medical and surgical history and any current medications that you are taking – **please bring all medications that you are taking with you to your pre-admission appointment in their original bottles.**
- Meet with the anesthesiologist (the pain doctor) who will talk to you about the medications that make you go to sleep, so you will not feel pain during surgery. The anesthesiologist will review your medications and ask you questions about your health. If you have medical problems, you may be referred to another doctor (a specialist) before surgery.

Some medications need to be stopped a week or two before surgery. Be sure to tell your family doctor or surgeon before your surgery if you take Aspirin®, Pradaxa®, Plavix®, Warfarin or any medications that thin your blood. Also tell them about any vitamins, herbal supplements or natural products that you are taking.



# Instructions: Day Before Surgery

Call the Operating Room Booking Office (O.R. Bookings Office) between 1:00 - 2:00 p.m. at 777-5522 or 777-5853. They will give you the surgery check-in time.

The time of surgery is not exact. It may happen earlier or later than planned.

Date of surgery: ..... 

Time of arrival at the hospital: .....



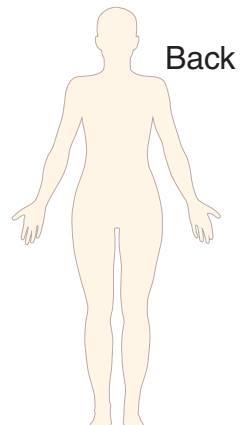
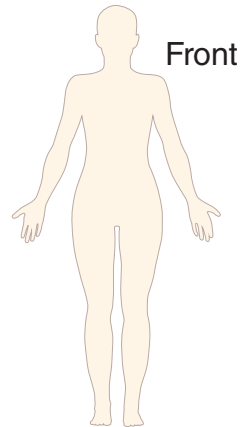
If you get sick and cannot attend your surgery, call your surgeon's office or the O.R. Bookings Office.

# Washing

Cleaning or “prepping” your skin before surgery can lower the chances of your surgical cut becoming infected. The hospital will give you **disposable washcloths** moistened with a special product that kills germs (antiseptic solution). Follow the steps listed below.

## The night before your surgery:

- First take a shower the **night** before surgery with your regular soap and shampoo.
- Allow your skin to dry fully.
- Do **not** apply lotions, powder or make-up.
- Do **not** shave any areas of the body, not even your legs, underarms or stomach. If you do, your surgery may be cancelled.
- Next, use one package of the **disposable washcloths** given to you to clean your skin again. To open the package:
  1. Hold the package in one hand.
  2. Lift the flap on the package with the other hand.
  3. Peel the flap away from the package.
- Use the first disposable washcloth to wipe over the areas of your skin that are marked by the nurse on the pictures to the right.
- Do **not** apply to any open cuts, your face, especially your eyes or ears, or your genitals (private parts).
- Allow the areas you wiped to air dry. Do **not** wash off. It is normal for the skin to have a ‘tacky/sticky’ feeling for several minutes after the antiseptic solution is applied. This will go away.





# Washing



- After your skin is dry, use the second disposable washcloth in the package to clean the same areas again.
- When you are finished with the disposable washcloths, throw them in the garbage.
- Wash your hands after using the cleansing washcloth and put on clean clothes for bed.

## The morning of your surgery:



- Do **not** shower the morning of your surgery.
- You may use a clean facecloth and warm water to wash your face and underarms only. Make sure you do **not** use this face cloth to wash the areas that you cleaned with the **disposable facecloth** last night.
- The **morning** of your surgery, use the second package of washcloths and follow the same instructions as the night before. Wipe over the areas of your skin, as directed by the nurse. Do **not** apply to any open cuts, your face, especially your eyes or ears, or your genitals (private parts).
- Do **not** wear lotion, perfume, makeup, nail polish, jewelry or piercings.
- Do **not** shave the area where the surgery will be done.
- Put on clean clothes.

# Diet

The nurse in the Pre-Admission Clinic will explain what to eat and drink before your surgery to give you the energy and nutrients you need to recover quickly.

A small number of people should not drink at all on the day of surgery. Your nurse will tell you if you need to stop drinking at midnight.

## The morning of surgery:

- Do **not** eat any food



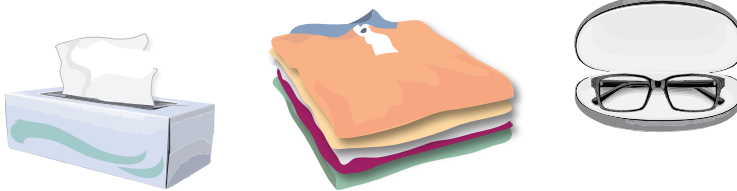
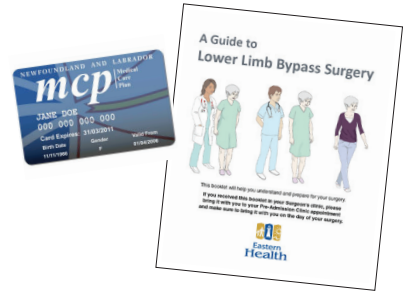
- You can drink water until **1 hour before** the time you are told to arrive for surgery. For example, if you are asked to arrive at 6:30 a.m., stop drinking at 5:30 a.m.

**1 hour before  
your scheduled  
arrival to the  
hospital**



# What to Bring to the Hospital

- ☐ This booklet
- ☐ Your MCP card
- ☐ Private insurance information (if you have any)
- ☐ Water bottle
- ☐ Bathrobe, non-slip slippers, loose comfortable clothing
- ☐ Toothbrush, toothpaste, mouthwash, comb, deodorant, tissues, unscented soap, and shaving supplies
- ☐ Glasses, contact lenses, hearing aids, dentures, and their storage containers labeled with your name
- ☐ Cane, crutches, walker (if you have any), labeled with your name



Please **do not** bring anything of value, including credit cards and jewelry.

The hospital is not responsible for lost or stolen or broken items.



# At the Hospital

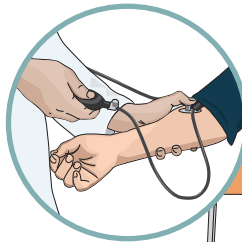
## Surgical Day Care

Go to the Surgical Day Care Department (SDC) at the time you were given by the O.R. Bookings staff. The clerk will ask you to sign an admission form and ask what type of room you would like. It is not always possible to have a private or semi-private room.

Your nurse in Surgical Day Care will complete a preoperative checklist with you, and then check your blood pressure, heart rate, and temperature. You will be given a hospital gown to change in to.

## Preoperative Waiting Area (PWA)

The nurse will complete a preoperative checklist with you. Some of the questions will be the same as you were asked in Surgical Day Care. This is for your safety.



## Operating Room

You will be brought to the operating room. You will meet your anesthesiologist (the doctor who will put you to sleep for surgery) and other members of your surgical team. You will be asleep and pain-free during your surgery. You may have an epidural catheter (tube) placed in you back before surgery to control your pain.

# In the Recovery Room

After your surgery, you will wake up in the Recovery Room. You may find it hard to stay awake, but this is normal. This room has other patients and may be noisy. No visitors are allowed here.

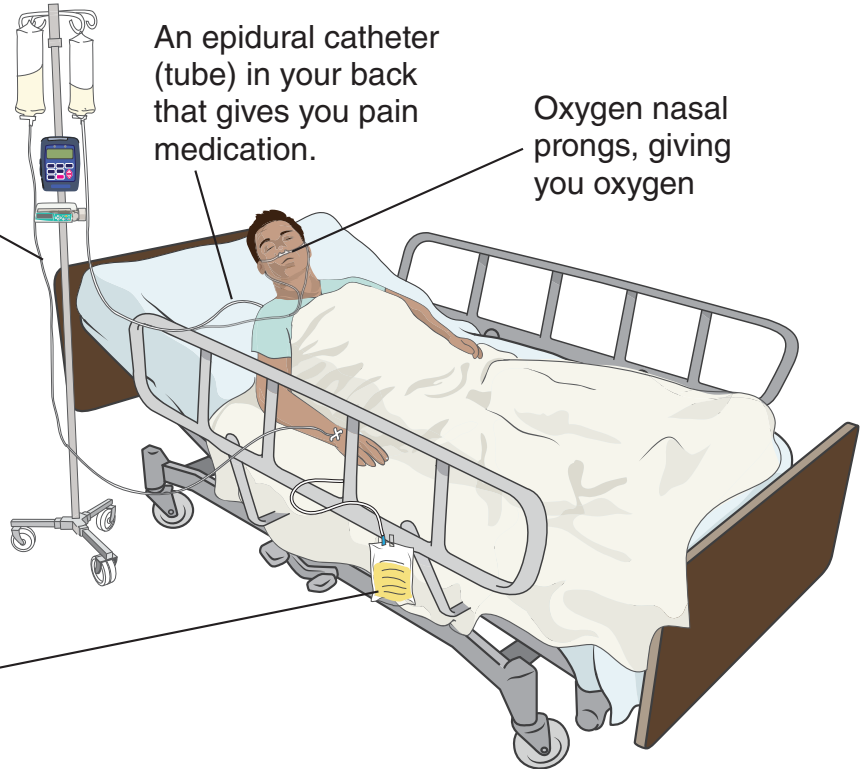
You may have:

An intravenous (IV), giving you fluids.

An epidural catheter (tube) in your back that gives you pain medication.

Oxygen nasal prongs, giving you oxygen

A urinary catheter (tube), draining urine out of your bladder (this may be removed in the recovery room before you go to your room on the surgical unit).

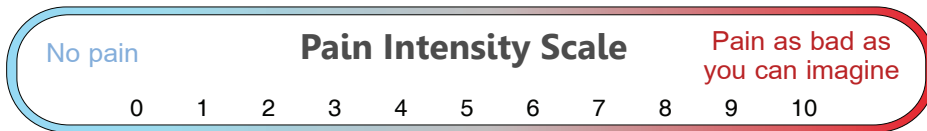


A nurse will:

- Check your pulse and blood pressure often
- Check your bandage(s)
- Give you medication if you have pain or if you feel stomach sick
- Make sure you are comfortable

When you are ready, you will be brought to your room on the surgical floor. Your family can visit you there after you are checked by your nurse.

Your nurse may ask you to describe your pain using a number between 0 and 10. 0 means no pain and 10 is the worst pain you can imagine. We want to keep your pain below 4. Please tell us if you have pain. We will help you.



It is important to control your pain because it will help you to:

- Take deep breaths
- Move more easily
- Eat better
- Sleep well
- Recover faster

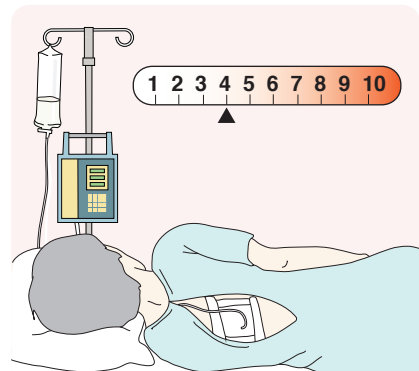
### Emotional Pain

There will be an emotional side to surgery. Worrying and stress are normal when you are recovering. But please tell your nurse if you feel the stress is too much. There are social workers and psychologists in the hospital to help.



### Epidural Infusion

You may have a small tube in your back to give you pain medicine. This is called an epidural. It is usually started in the operating room before you go to sleep. Your epidural may be removed on Day 1 after your surgery, when your pain is controlled.

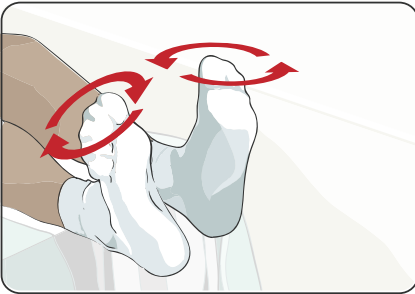


# Exercises

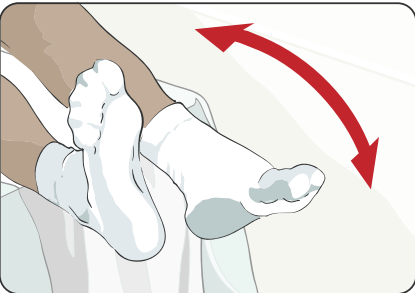
It is important to move after surgery to prevent pneumonia, blood clots, and muscle weakness. Start these exercises when you wake up and continue them while you are in the hospital.

## Leg exercises

These exercises help your blood move around in your legs. Repeat each exercise 10 times. Do the full set of exercises every hour.



Rotate your feet to the right and left.



Wiggle your toes and bend your feet up and down.



Stretch your legs out straight.

# Exercises

## Deep breathing and coughing exercises

An **incentive spirometer** is a device that helps you breathe deeply to prevent lung problems.

To use your incentive spirometer:



Put your lips around the mouthpiece, breathe in deeply, and try to keep the red ball up for 2 to 4 seconds.



Remove the mouthpiece, breathe out, and rest for a few seconds.



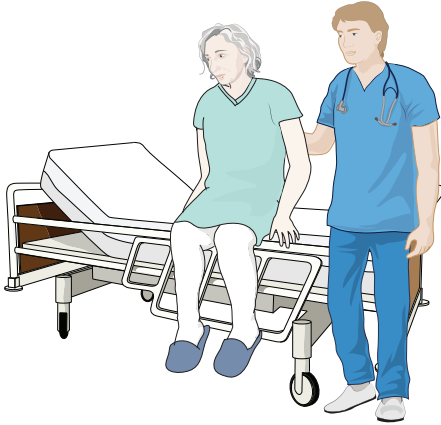
Repeat this exercise 10 times every hour while you are awake.



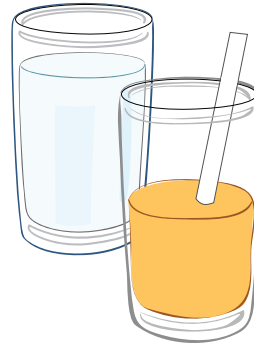
Take a deep breath and cough. If you have some secretions, cough them up.



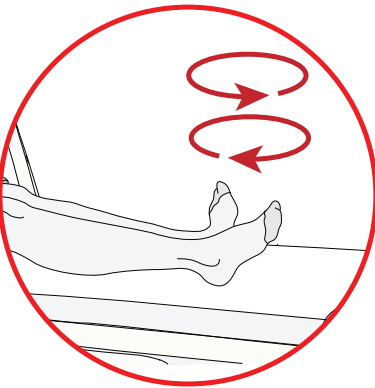
# Goals for the Evening of Surgery



Sit on the side of the bed with help from a nurse.



It is important to drink liquids after your surgery.



Do your leg exercises (see page 16).



Do your breathing exercises (see page 17).

# Goals for Day 1

## Breathing

- Do your breathing exercises.

## Activities

- Do your leg exercises.
- Sit in a chair for meals.
- Walk in the hallway one time, with help.
- Be out of bed, off and on, for a total of 6 hours, as you are able.



## Pain control

- Tell your nurse if your pain reaches 4/10 on the pain scale.



## Eating and drinking

- Drink liquids, including protein drinks like Ensure or Boost.
- Eat regular food, as you are able.



## Tubes and lines

- For most patients, your urinary catheter will be removed today. For some patients, you will keep your catheter until Day 2.
- If you have an Epidural (tube in your back), it may be removed today and you will take pills for pain.

# Goals for Day 2

## Breathing

- Do your breathing exercises.

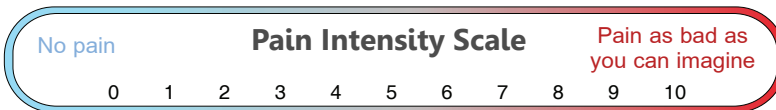
## Activities

- Do your leg exercises.
- Sit in a chair for meals.
- Walk in the hallway two times, with help.
- Be out of bed, off and on, for a total of 6 hours, as you are able.



## Pain control

- Tell your nurse if your pain reaches 4/10 on the pain scale.



## Eating and drinking

- Drink liquids, including protein drinks like Ensure or Boost.
- Eat regular food, as you are able.



## Tubes and lines

- Your IV may be removed when you are drinking well.

# Goals for Day 3

## Breathing

- Do your breathing exercises.

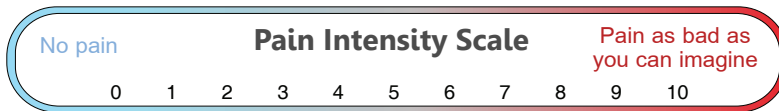
## Activities

- Do your leg exercises.
- Sit in a chair for meals.
- Walk in the hallway three times, with help.
- Be out of bed, off and on, for a total of 6 hours, as you are able.



## Pain control

- Tell your nurse if your pain reaches 4/10 on the pain scale.



## Eating and drinking

- Drink liquids, including protein drinks like Ensure or Boost.
- Eat regular food, as you are able.



## Tubes and lines

- All your tubes and lines should be removed if your pain is well controlled and you are drinking well. You will take pills to control your pain.

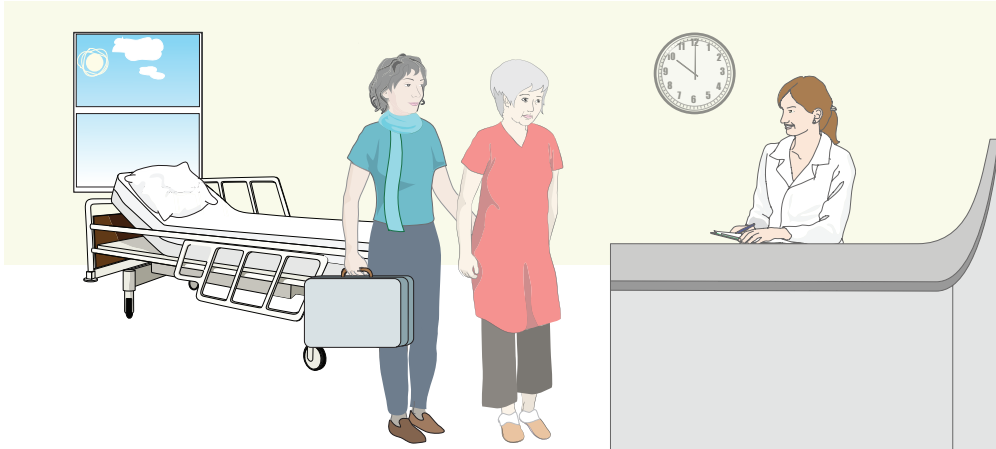


## Planning for going home

- You may be sent home from hospital on day 4 or 5 after your surgery. This will depend on how you are feeling. Talk with your surgical team about going home.

# Goals for Day 4 or 5: Going Home

Plan to go home today before 11:00 a.m.



We will give you information about your follow-up appointment with your surgeon before you leave the hospital. The nurse will review your medications to take at home.



If you have clips or stitches to be removed, we will make arrangements for the Community Health nurse to remove them when you go home.



# At Home

## Pain

You can have pain for a few weeks after surgery. Take the pain medication prescribed by the surgeon when you left the hospital.

If you have severe pain that is not helped by the pain medication, go to the nearest Emergency Room at your nearest hospital.



## Activities

Ask your family or friends to help you when you go home. If you live alone, consider household help or stay with someone until you are stronger.

Most people return to their normal activities within 6 weeks after surgery. Increase your activities gradually and take time to rest.

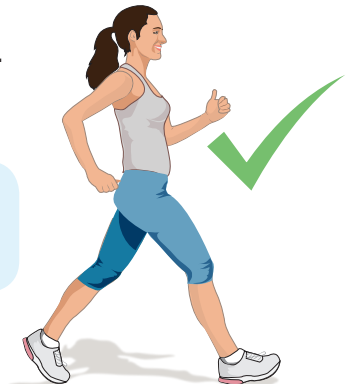
Do **not** lift, push or pull more than 5 lbs (2.5 kg) for 6 weeks.

Do **not** drive your car until you have permission from your surgeon. Also, you should call your car insurance company to talk about when you can drive after surgery.



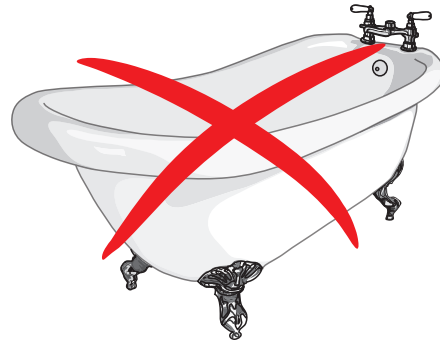
Walk every day if possible - it is good exercise (shopping malls are good places to walk in the winter and summer). Increase your walking distance as you are able.

It is normal to feel tired and weak after your surgery, so remember to take time to rest between activities.

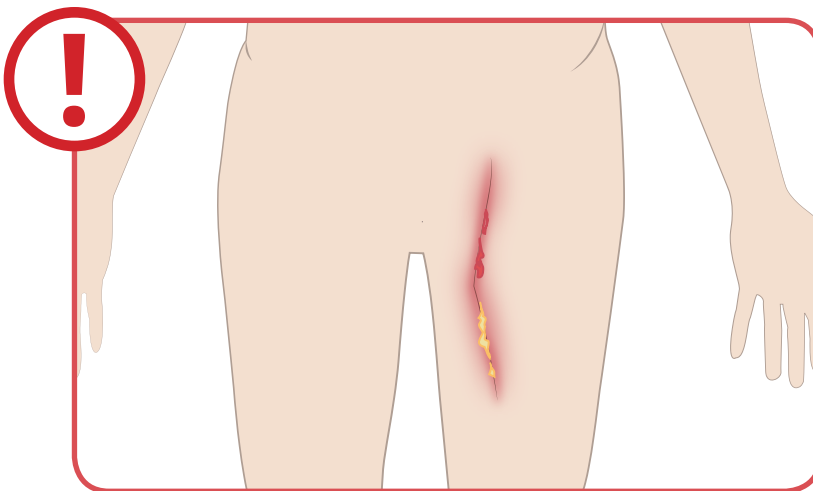


# Incision

Your incision(s) may be slightly red and uncomfortable for 1-2 weeks after surgery. You may take a shower when you go home. Let the water run softly over your incision(s) and wash the area gently. Do **not** scrub. Do **not** take a tub bath for two weeks.



Visit your family doctor or call your surgeon's office if your incision becomes warm, red, and hard, or if you see drainage coming from it.



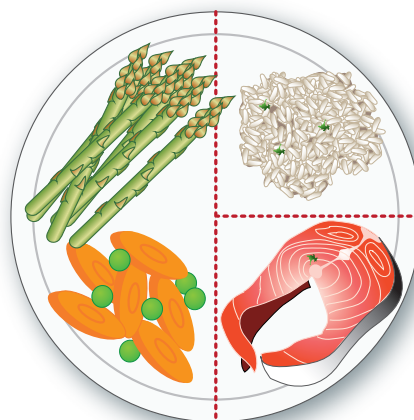
# Diet

Eat plenty of fruits and vegetables and drink fluids to prevent constipation. Choose foods low in total fat and saturated fat. Too much fat and cholesterol may damage the walls of your arteries.

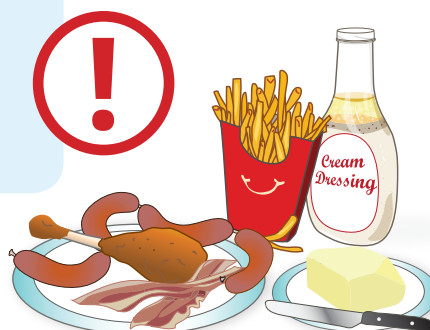
Proteins should fill a quarter of your plate. Some examples of proteins are lean meats, chicken, fish, eggs, and tofu.

Starches should fill a quarter of your plate. Some examples of starches are whole grain breads and cereals, pasta, potatoes, and rice.

Fruits and vegetables should fill half of your plate. Some examples are peppers, lettuce, cucumber, carrots, turnip, apples, bananas, and berries.



Your doctor may ask you to eat less salt, eat fewer calories or follow a diabetic diet.





# Controlling Your Blood Pressure

High blood pressure makes your heart work harder and may damage your arteries. Control your blood pressure by taking the pills your doctor prescribes, even if you feel well.

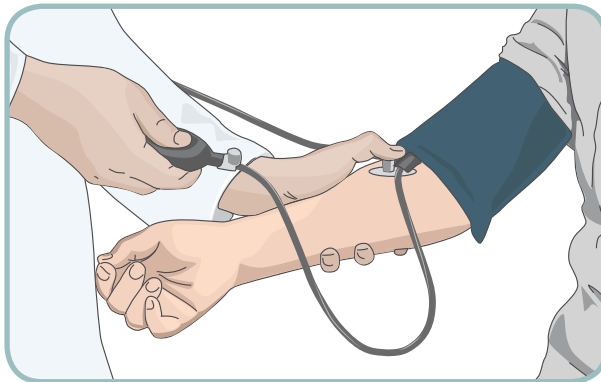
If your high blood pressure is caused by stress:

- Talk with your family and friends.
- Take time to relax.
- Ask for professional help, if you need it.



If your high blood pressure is caused by being overweight:

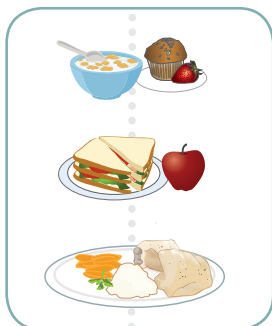
- Eat healthy foods to control your weight.
- Ask for help from a dietitian, if you need it.



# Controlling Your Blood Sugar

If you have diabetes, it is important to control your blood sugar after you have surgery. Having high blood sugar can cause damage to your heart and blood vessels. It can also make it harder for your body to heal after surgery.

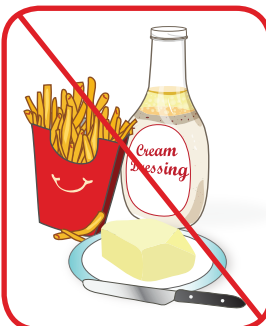
Some ways to keep your blood sugar under control are:



Eat three healthy meals at regular times



Limit sweets, jams, pastries, and soft drinks



Limit fatty foods, chips, and salad dressings



Drink water regularly



Be active



Control your weight



Try to control your stress

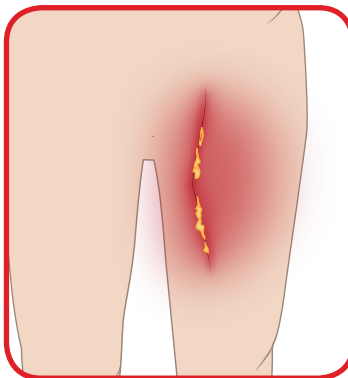
Talk with your doctor if you need help controlling your diabetes.

# When to Call Your Doctor

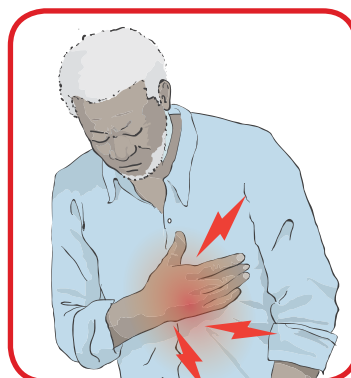
Call your surgeon or go to the nearest Emergency Department if you have:



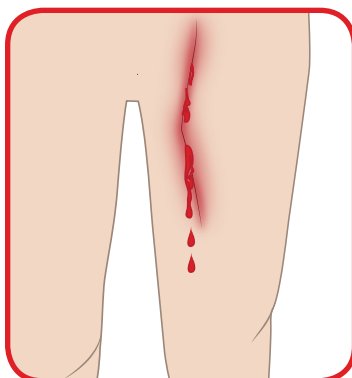
Severe pain, numbness, coldness or weakness in your legs or buttocks



Signs and symptoms of infection like redness of wounds, drainage from your surgical cut, coughing, or burning sensation when you urinate



Rapid heartbeat or chest pain



Bleeding from your wound (cut). Apply direct pressure and call an ambulance



Sudden weakness

# Resources

If you have questions or concerns, please call:

Health Information and Advice for Adults: **Dial 811**

St. Clare's Mercy Hospital, St. John's: (709) 777-5000

Your family doctor: \_\_\_\_\_

Your pharmacist: \_\_\_\_\_

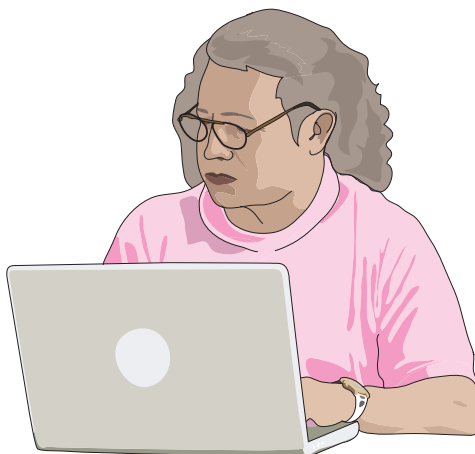
Your local health clinic: \_\_\_\_\_

Your surgeon's office: \_\_\_\_\_

## **The Canadian Society for Vascular Surgery:**

<https://canadianvascular.ca/Patients>

This booklet and many other patient education materials can be downloaded at the MUHC Patient Education Office website:  
[www.muhcpatienteducation.ca](http://www.muhcpatienteducation.ca)



# Suggestions to Help You Stop Smoking

Tobacco damages the wall of your arteries. Even smoking 1 or 2 cigarettes is harmful. It decreases the amount of oxygen in your blood and makes your blood clot more easily.

## Phases of quitting:

1. Preparing to quit
2. Choosing a quit date
3. Coping with withdrawal
4. Fighting relapses



## Strategies to help you quit:

- Stop smoking now and you will already be on your way to quitting.
- Take it one day at a time. Think of yourself as a non-smoker. Be proud of what you have already done.
- Ask your family and friends not to smoke around you.
- Ask a family member, or a friend, to stop smoking at the same time.
- Join a Stop Smoking Group and kick the habit with other people.
- Speak with your doctor about aids to help you quit, such as the nicotine patch.

If you are looking for help, please call the Newfoundland and Labrador Smokers' Helpline: 1-800-363-5864.

## Notes

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## Notes

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Eastern  
Health