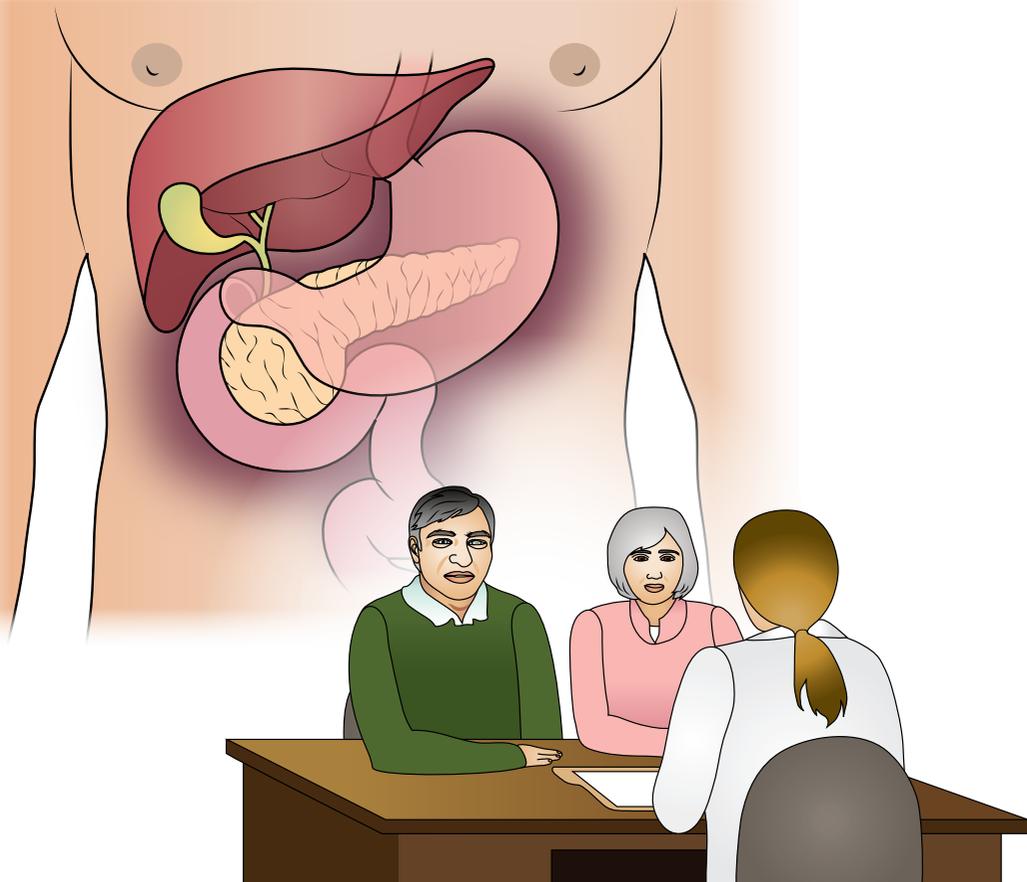


# A Guide to the Whipple Procedure



Hôpital général juif  
Jewish General Hospital

Centre intégré  
universitaire de santé  
et de services sociaux  
du Centre-Ouest-  
de-l'Île-de-Montréal

Québec   
Integrated Health  
and Social Services  
University Network  
for West-Central Montreal

This booklet was developed by the McGill University Health Centre's (MUHC) Surgery Recovery Program. We extend a special thank you to this team and the MUHC Patient Education Office as a whole for permission to adapt their model and content for this booklet.

We would like to recognize the MUHC 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.

You can find a copy of this pamphlet on the

**JGH Patient & Family Resource Centre website: ([www.jhg.ca/PFRC](http://www.jhg.ca/PFRC))**



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

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# What is a care pathway?

When you are admitted to the hospital for a Whipple procedure, you will be part of a fast recovery program called a Clinical Care Pathway. This program combines the best medical research available to help you recover quickly and safely. Your health care team worked together 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.
- Give you daily goals to achieve.

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

Please bring this booklet with you on the day of surgery. Use it as a guide during your hospital stay. Hospital staff may refer to it as you recover, and review it with you when 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.

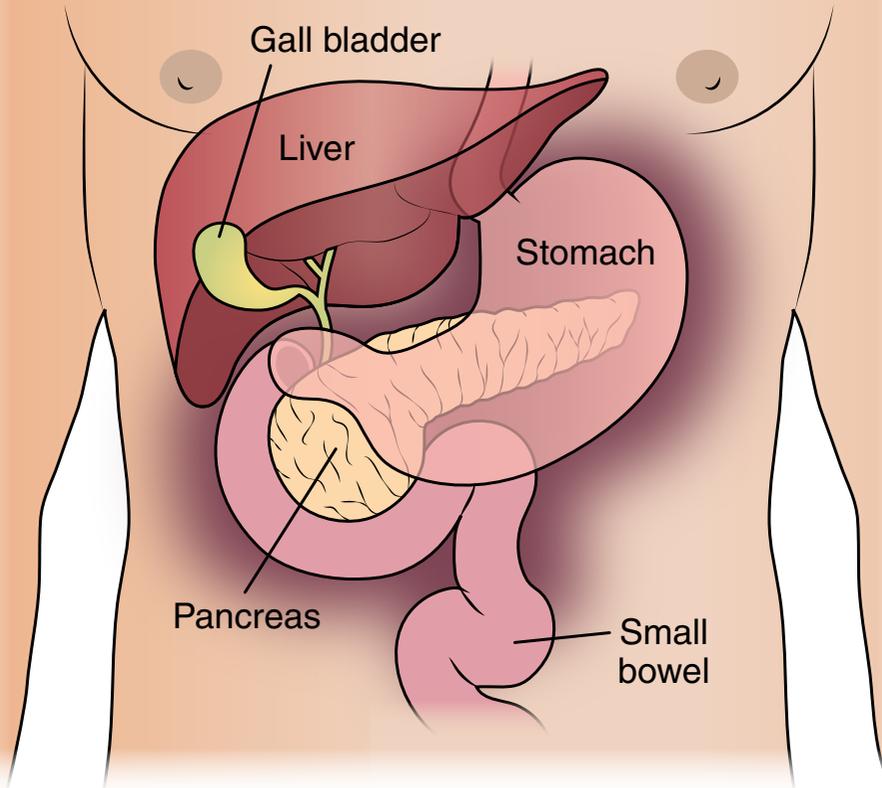
*Your Jewish General Hospital  
Hepato-pancreatico-biliary surgery team*

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

# What is the pancreas?

The pancreas is a long organ located in the back of your belly. The pancreas does two important things to keep you healthy:

- It helps to digest nutrients.
- It helps to control your blood sugar.



# What is a Whipple procedure?

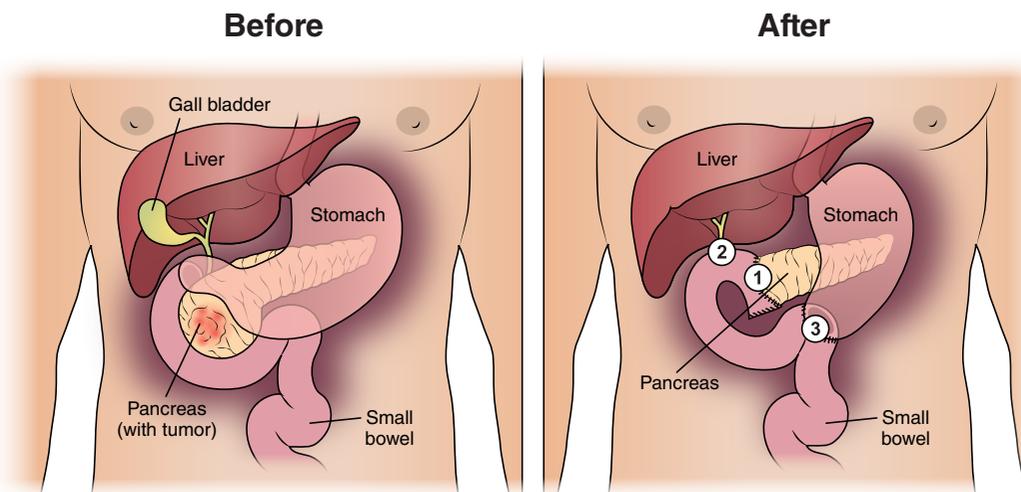
**A Whipple procedure (also called pancreaticoduodenectomy) is a surgery that removes:**

- About one third of the pancreas.
- The gallbladder and part of the main bile duct.
- One third of the stomach.

**After these organs are removed:**

- The small bowel is reconnected to the pancreas (see #1 in the “After” picture below).
- The small bowel is also reconnected to the remaining bile duct (see #2 in the “After” picture below).
- The small bowel is connected to the stomach (see #3 in the “After” picture below).

The main reason for this procedure is cancer.



# What is a Whipple procedure?

The surgery may be done 2 ways. Your surgeon will discuss the best approach with you depending on your situation.

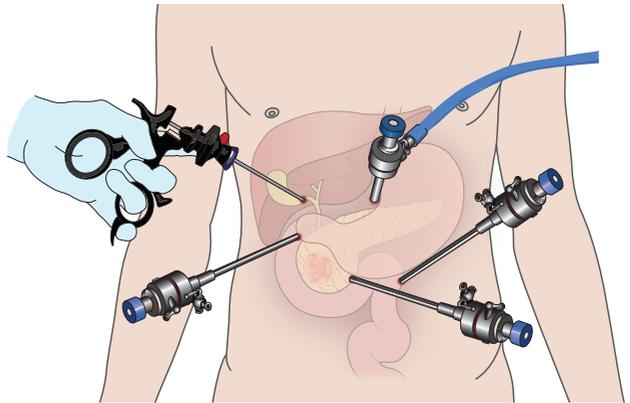
## 1. Minimally invasive

Minimally invasive surgery involves doing the same operation using a camera and small incisions.

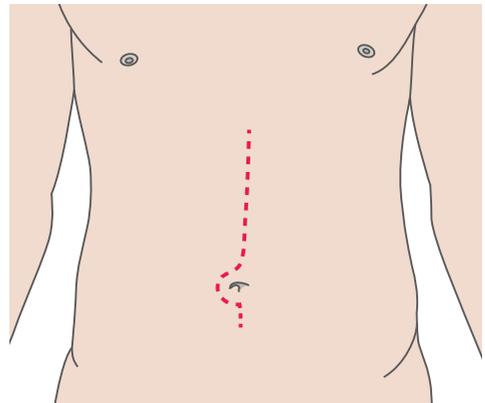
Patients who have this type of surgery usually have:

- Shorter hospital stay
- Less pain
- Earlier return to their regular activities
- Fewer wound infections
- Less scarring
- Longer surgical time.

### Minimally invasive surgery



### Open surgery



## 2. Open

The surgeon works through one long cut in your belly.

A Whipple procedure is a long surgery. The time ranges from 5 to 10 hours depending on the approach.

# Potential risks

Whipple procedures are long and complicated. Because of that, it is more common to have complications than from a simpler surgery. This is true whether the surgery is minimally invasive or open.

## These complications can include:

Mortality: 2 to 4 people out of a hundred

Pancreas leak (#1): 10 to 33 people out of a hundred

Bile duct leak (#2): 2 people out of a hundred

Stomach leak (#3): 1 person out of a hundred

Infection: 15 people out of a hundred

Significant bleeding: Less than 5 people out of a hundred

Slow stomach emptying: 10 people out of a hundred

Post-operative diabetes: 30 people out of a hundred

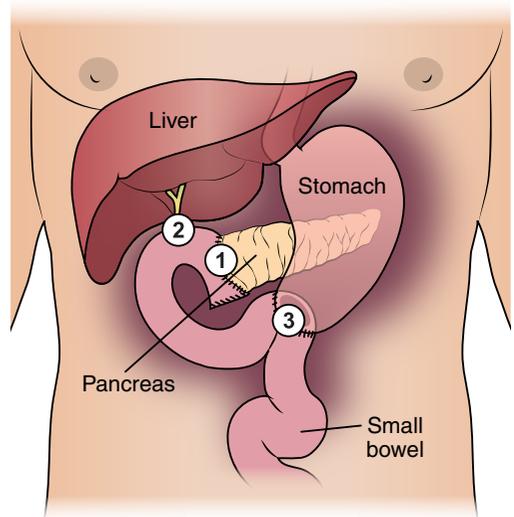
Pancreatic enzyme insufficiency: 30 people out of a hundred

Heart/lung complications:  
5 people out of a hundred

Bowel injury: 1 person out of a hundred

Blood clots: 5 people out of a hundred

Re-operation: Less than 5 people out of  
a hundred



# Preparing for surgery : What you can do

## Be active

Exercise will help your body to be as fit as possible before your surgery. If you are already active, keep up the good work. If you are not, start adding activity into your day. Exercise does not need to be hard to make a difference. A 15-minute walk is better than no exercise at all. Aim to walk 1-2 hours every day.



## Stop smoking

We strongly suggest you stop smoking completely 3-4 weeks before surgery to reduce your risk for lung problems. Speak to your doctor if you are thinking about this.

There are medications and other options that can help. See page 33 to learn more.



## Restrict alcohol

Do not drink alcohol for 24 hours before your surgery. Alcohol can interact with the medicine you will receive in the hospital. Please tell us if you need help drinking less before surgery.



# Preparing for surgery : What you can do

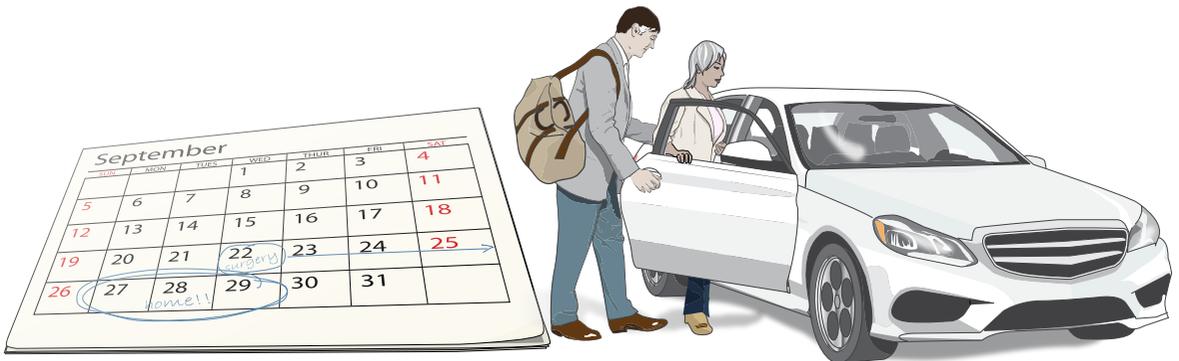
## Plan ahead

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 at home.



## Arrange transportation

You may go home from the hospital 5-7 days after your surgery. Tell your nurse if you have concerns about going home. Remember to arrange a ride.



# Pre-Surgical Screening Clinic

Before your surgery, you will have an appointment at the Pre-Surgical Screening Clinic. Please bring this booklet to your appointment.

## During your visit at the clinic, you will:

- Have blood tests, an electrocardiogram (ECG), a chest x-ray, CT scans, and other tests prescribed by a doctor.
- Meet with a nurse who will explain how to get ready for surgery and what to expect while you are in the hospital
- Meet with a doctor who will review your medication and ask you questions about your health. If you have medical problems, you may be referred to another doctor (a specialist) before surgery.

You may need to stop taking some medicines and herbal products before surgery. The Pre-Surgical Screening Clinic doctor will explain which medicines you should stop and which ones you should keep taking. Please ask your pharmacist for a list of your medications and fax this list to us at **514-340-7583**.



## JGH Pre-Surgical Screening Clinic:

Pavilion A, 6<sup>th</sup> floor, room 605.

If you have any questions, you may contact the Pre-Surgical Screening Clinic nurses:

**514-340-8222, extension 22944**

Monday to Friday,  
8:00am to 4:00pm.

# Phone call from Admitting

The day before your surgery, the Admitting Department will phone you to tell you when to come to the hospital. You may be admitted that evening or the next morning.

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



**Date of surgery:** .....

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

**Location:** If you are admitted in the morning:

- go directly to the **Perioperative Unit**,
- 1<sup>st</sup> floor of Pavilion K. Enter Pavilion K at 5767 Légaré Street.
- Take the main public elevators on your left (K #1-4) to the 1<sup>st</sup> floor.
- Follow the signs to the Perioperative Unit.

Their phone number is **514-340-8222 extension 28211**.

If you are admitted the evening before, go to the Admitting Office at Pavilion B 114, right by the Cote-Ste-Catherine Entrance. They will assign you a room.

**If you do not receive a call by 7pm the day before your surgery, call the Admitting Department at 514-340-8222, extension 28211.**



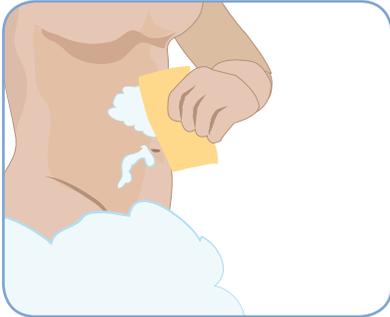
If you get sick or become pregnant, please call your surgeon's office as soon as possible at: **514-734-9969**.

We are a specialized center, your surgery may be delayed or canceled because of an emergency. You will be rescheduled.

# Washing

Before your surgery, you will need to wash yourself using the special sponge or soap you received from the Pre-Surgical Screening Clinic.

## The night before surgery:



Wash your whole body (including your belly button) using one sponge or soap.

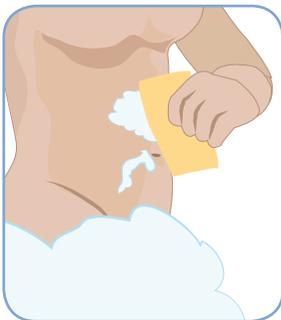


**Do not shave the area to be operated on.**



Wear freshly washed clothes to bed.

## The morning of surgery:



Wash your whole body (including your belly button) using one sponge or soap.



Put on freshly washed clothes.



Do not wear lotion, perfume, deodorant, antiperspirant, makeup, nail polish, jewelry or piercings.



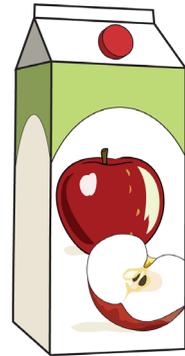
**Do not shave the area to be operated on.**

# Eating and drinking

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

## The day before surgery:

- Eat and drink normally until midnight
- Drink 800 mls of apple juice in the evening around 10pm
- After midnight, do not have any food, dairy products, or juice with pulp



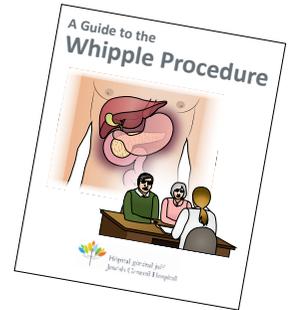
Apple juice

## The morning of surgery:

- Do not eat any food
- 2 hours before surgery, quickly drink (over 5-10 minutes) 400 mls of apple juice
- Do not have any dairy products or juice with pulp
- Stop drinking 2 hours before your surgery, after your apple juice. This is usually the same time as you are asked to arrive at the hospital. Exception: If you are the first case of the day at 7:30 am, you will be asked to arrive at 6:00 am. Stop drinking at 5:30 am.

# Things to bring to the hospital

- This booklet
- Your sleep apnea machine, if needed
- Your medication list
- Valid Medicare and hospital cards
- Private insurance information, if you have any
- Two packages of your favourite gum
- Bathrobe, slippers, pyjamas, loose comfortable clothing
- Toothbrush, toothpaste, mouthwash, comb, deodorant, soap, shaving supplies, tissues, and perhaps earplugs
- Glasses, contact lenses, hearing aids, dentures, and their storage containers labeled with your name
- Cane, crutches, walker, or any ambulation aids you use at home labeled with your name



Please do not bring anything of value, including credit cards or jewelry. There is no storage available at the hospital for personal items. The hospital is not responsible for lost or stolen items.



# At the hospital

## Admitting area:

If you are admitted on the morning of your surgery, go directly to the Perioperative Unit 1<sup>st</sup> floor of Pavilion K. Enter Pavilion K at 5767 Légaré Street. Take the main public elevators on your left (K #1-4) to the 1<sup>st</sup> floor. Follow the signs to the Perioperative Unit. The phone number of the unit is **514-340-8222 #25199**.

If you are admitted the evening before your surgery, go to the Admitting Office, Pavilion B 114, right by the Cote-Ste-Catherine entrance.

## Pre-operative area or room on the unit:

The nurse will ask you to change into a hospital gown and will complete a preoperative checklist with you. You will have another blood test, if needed.

## Operating room:

An orderly will take you to the operating room. You will meet your anesthetist (the doctor who will put you to sleep) and other members of your surgical team. They may start an epidural (a small tube for pain control) in your back. You will be asleep and pain-free during your surgery.



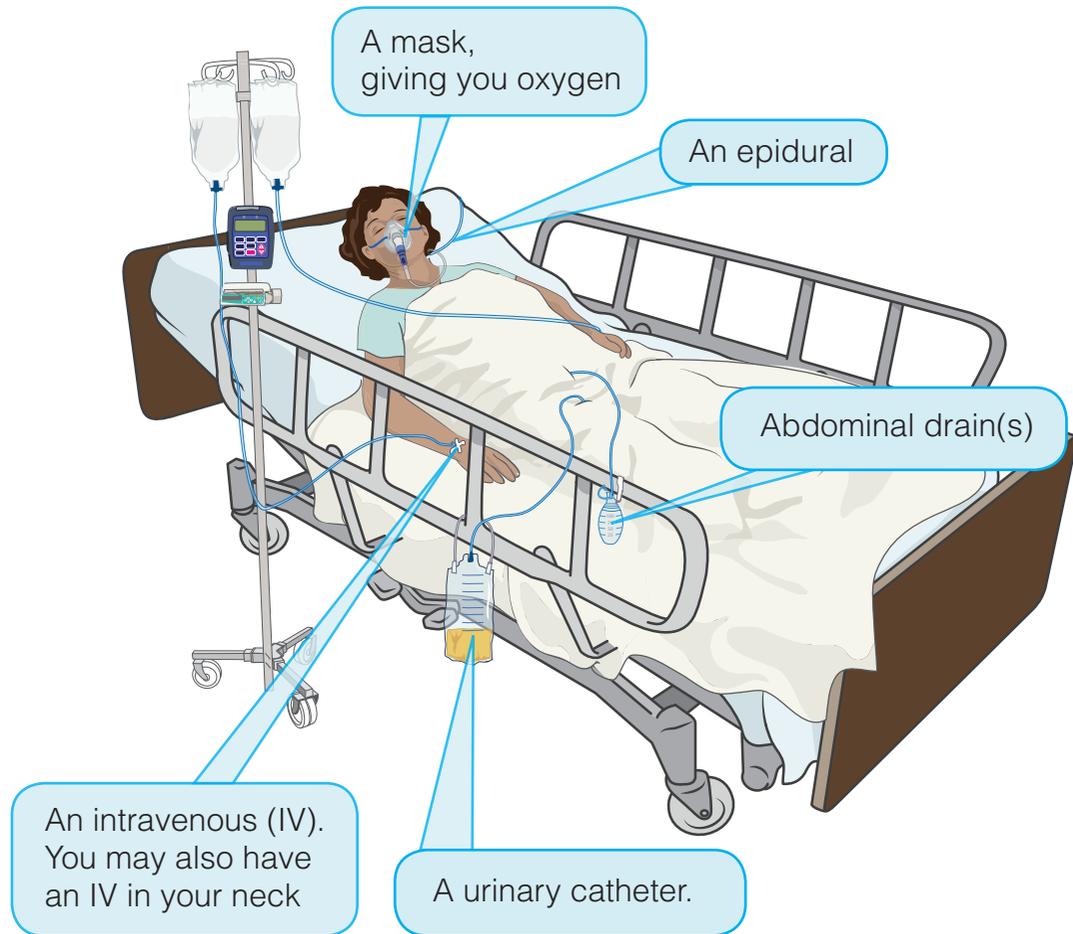
## Waiting room:

Family or friends may wait for you in the waiting room next to the Perioperative Unit. It will be several hours before they will be able to visit you in your room.

There are no visitors in the Recovery Room unless you are staying there overnight.

# In the Recovery Room

After your surgery, you will wake up in the Recovery Room (PACU). You will be there for several hours or overnight.



# Pain control

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

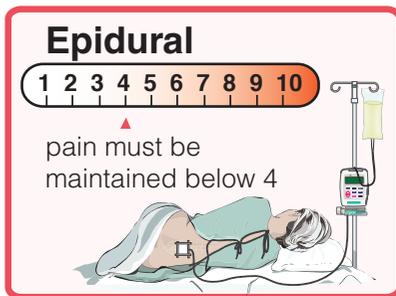
- Take deep breaths
- Move more easily
- Eat better
- Sleep well
- Recover faster
- Do things that are important to you

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 4/10.



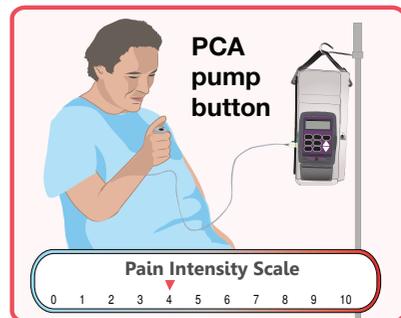
## Epidural infusion:

Your anesthesiologist may place a small catheter (tube) in your back to give you continuous pain medicine. This is called an epidural infusion. It is usually started in the operating room before you go to sleep. It is usually removed on Day 3 after surgery.



## Patient-Controlled Analgesia (PCA):

Instead of an epidural infusion, some patients have a medicine pump attached to their IV. When you push a hand-held button, the pump gives you a safe dose of pain medicine.



**Pain control is teamwork!** Remember: you play an active part in your recovery. Help us control your pain:

- Always tell your nurse if you have pain
- Do not wait until the pain is severe before telling us.

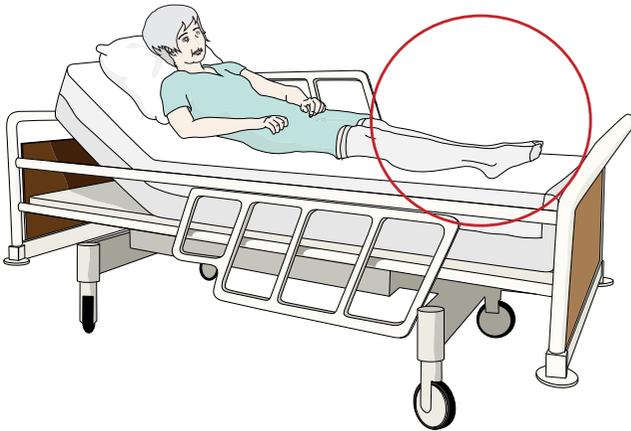
# Exercises

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

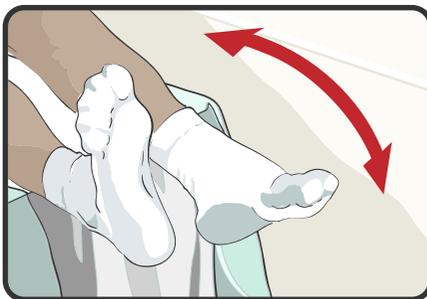
Getting out of bed and walking is very important for your recovery - the earlier the better!!!

## Leg exercises

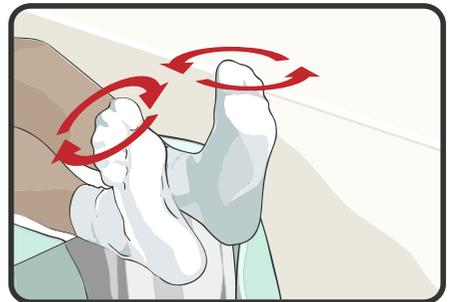
These exercises help your blood to circulate in your legs. Repeat each exercise 4 to 5 times every half hour while you are awake.



Stretch your legs out straight.



Wiggle your toes and bend your feet up and down.



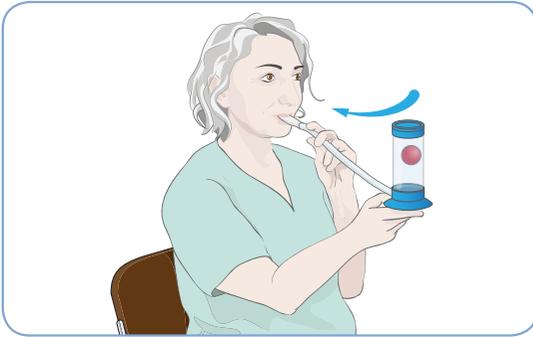
Rotate your feet to the right and left.

# Exercises

## Deep breathing and coughing exercises:

An inspirimeter is a device that helps you breathe deeply to prevent pneumonia.

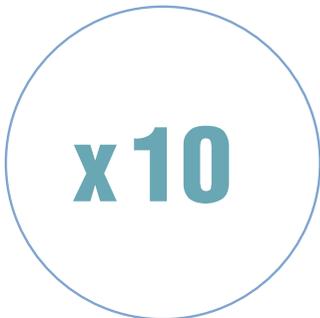
### To use your inspirimeter:



Put your lips around the mouthpiece, breathe in deeply, and try to hold the ball up as long as you can. Drop the ball slowly.



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 using a small blanket or pillow to support your incision.

Deep breathing and coughing exercises will help prevent lung complications.

# In your room

## Goals for the evening of surgery

You will be given a room in Pavilion K after your surgery.

Get up and sit in a chair with your nurse's help.



You can have ice chips for comfort. Chew gum for 30 minutes to help your bowels start to work. Drink your protein drink.

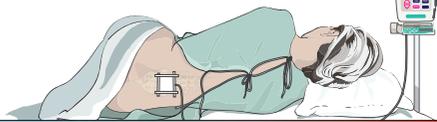


Do your leg exercises (see page 19) and your breathing exercises every hour (see page 20).



Always tell your nurse if you have pain.

### Epidural



### Pain Intensity Scale



Your blood sugar will be monitored closely throughout your stay.

# One day after surgery

- Be out of bed, off and on, for a total of 8 hours, as tolerated
- Sit in a chair for meals
- Walk in the hallway 3 times, with help
- Do your breathing exercises every hour



- Drink liquids including your protein drink
- Eat a clear fluid diet as tolerated
- Chew gum for 30 minutes, 3 times a day to stimulate your bowel

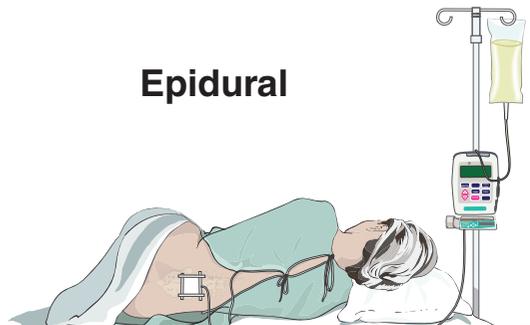


- Your urinary catheter will be removed today. Once removed, get up and walk to the bathroom to urinate
- The IV in your neck may be removed today. The nurse may put a new IV in your arm instead
- The nurse will monitor the liquid from your abdominal drain



- Always tell your nurse if you have pain

## Epidural



## Pain Intensity Scale

0 1 2 3 4 5 6 7 8 9 10

# Two days after surgery

- Be out of bed, off and on, for a total of 8 hours, as tolerated

- Sit in a chair for meals

- Walk in the hallway at least 3 times

- Aim to walk more each day

- Do your breathing exercises every hour



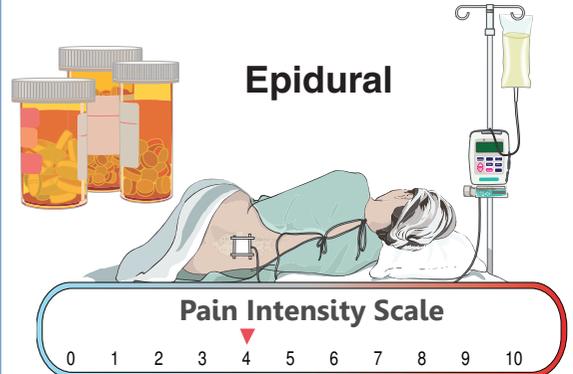
- Drink liquids including your protein drink
- Eat regular food as tolerated
- Chew gum for 30 minutes, 3 times a day



- Get up to the bathroom to urinate
- The nurse will monitor the liquid from your abdominal drain



- Always tell your nurse if you have pain
- If you have an epidural, it may be removed today. You will take pills to control your pain.



# Three days after surgery until discharge

- Be out of bed, off and on, for a total of 8 hours, as tolerated
- Sit in a chair for meals
- Walk in the hallway at least 3 times
- Aim to walk more each day
- Do your breathing exercises every hour



- Drink liquids including your protein drink
- Eat regular food as tolerated
- Chew gum for 30 minutes, 3 times a day



- The nurse will monitor the liquid from your abdominal drain
- The doctor might decide to take your abdominal drain out today



- Always tell your nurse if you have pain
- If you have an epidural, it may be removed today. You will take pills to control your pain.

**Epidural**  
pain must be maintained below 4

**Pain Intensity Scale**

0 1 2 3 4 5 6 7 8 9 10

You may go home from the hospital on the 5<sup>th</sup> day after your surgery. Please tell your nurse if you have any concerns about going home. Remember to arrange your ride.

# Going home

## You can go home when:

- Your pain is controlled with pills.
- You are eating and drinking well.
- You are able to walk around.

Plan to go home before 11 am. If you are unable to leave the hospital at this time, you can wait in the family room located on the unit. This way, we will be able to prepare your room for the next patient.



## After surgery follow-up appointment

You will need to meet with your surgeon 3-4 weeks after your surgery.

**Please call** 514-734-9969

Monday to Thursday from 8 am-2 pm to schedule your appointment.

# What you need to know

## Pain:

You may have some pain during the first few weeks after your surgery. Pain relief is still very important for you to continue to recover quickly and safely.

## If you feel pain:

- Take acetaminophen (Tylenol) and your
- anti-inflammatory medication (e.g. Advil).  
If you still have pain, take your narcotic (e.g. oxycodone) as advised by your doctor.



## Pain medicine may cause constipation. To help your bowels stay regular:

- Drink more liquids
- Eat more whole grains, fruits and vegetables
- Get regular exercise (a 15-minute walk is a good start)
- Take stool softeners if your doctor tells you to.

## Contact your surgeon or go to the emergency room if you:

- Have severe pain that is not relieved by your pain medication
- Have a fever (greater than 38 °C / 100.4 °F)
- Feel generally unwell
- Can't drink liquids or keep them down.



# What you need to know

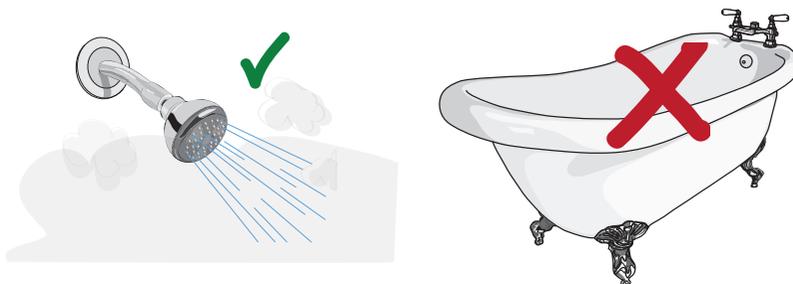
Your **surgical wound(s)** may be slightly red and uncomfortable during the first 1-2 weeks after surgery.

Your nurse will arrange to have the CLSC remove your clips 10-14 days after surgery. The CLSC nurse will contact you at home.

If you are going home with an **abdominal drain(s)**, the nurse will explain how to care for it before you leave. Refer to pages 28-29 for information.

If you need to take **blood thinner injections** at home, your nurse will show you or your family how to do it.

You may shower when you get home. Gently wash the area. Let water run over your wound(s) (do not scrub the area). If you have an abdominal drain(s), wrap plastic wrap (e.g. Saran wrap) around it before you shower. Do not take a bath for at least two weeks. Your doctor will tell you when it is ok to take one.



## Contact your surgeon or go to the emergency room if:

- your surgical wound(s) becomes warm, red, and hard
- you see pus or any fluid leaking out of your surgical wound(s)
- you see bright red blood or a change in the color of the liquid from your abdominal drain(s)

# Your abdominal drain

The tube connects to a bulb-shaped container that collects fluid. This helps healing.

An abdominal drain has:

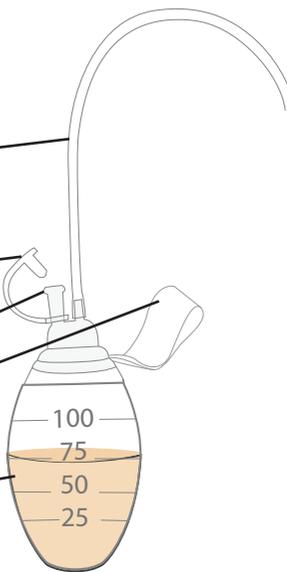
tubing

cap

drain opening

belt hook

bulb



At first, the fluid draining might be blood-tinged. After a few days, there will be less fluid and it will become clear yellow.

## How to empty your abdominal drain

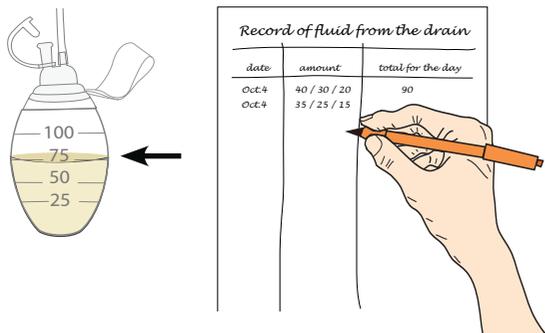
1. Wash your hands, before handling the abdominal drain.
2. Open the cap. As soon as you open the cap, the bulb will take back its shape. The abdominal drain bulb is like a measuring cup.



# Your abdominal drain

## How to empty your abdominal drain (continued)

3. Write down the amount of fluid found in the abdominal drain.



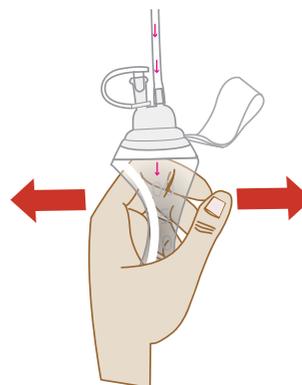
4. Empty the fluid in the toilet by squeezing the bulb until it is empty.



5. Once empty, squeeze the bulb and hold the squeeze while you close the cap.



6. Let go of the bulb. It should stay collapsed and slowly fill with fluid during the day.



Contact your surgeon or go to the emergency room if:

- The drain fluid becomes bright red blood
- The drain fluid becomes foul-smelling or thick

# Diet

You may eat anything you want, unless your doctor, nurse, or nutritionist, tells you not to.

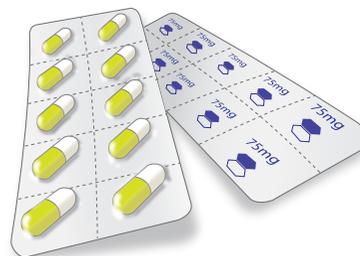
Include foods that contain protein to help your body heal. Meat, fish, poultry and dairy products are good sources of protein.



Because part of your stomach was removed, you may need to eat smaller meals more often. Stop eating when you feel full. Try eating smaller amounts at each meal and add nutritious snacks between meals, such as high protein, high calorie shakes, or commercial supplements like Ensure or Boost.

You may need to take pills for some time to help digestion. Your pancreas might not make enough of the enzymes needed to digest nutrients, and these pills will help. These pancreatic enzymes will be prescribed if needed.

Some people develop diabetes after a Whipple procedure. If this happens to you, a diabetes nurse will teach you how to check your sugar and take medications.



If you cannot drink fluids or keep them down, call your surgeon or go to the emergency room. Tell your surgeon if you have persistent loose stools or diarrhea. You may need pancreatic enzymes.

# Exercise and activities

## After you go home:

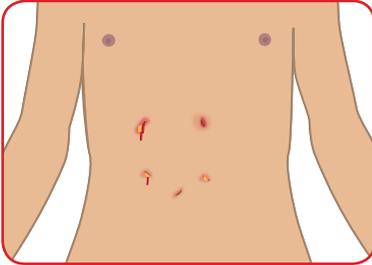
- You can expect to be fatigued for up to 2 months.
- Continue to walk several times each day. Gradually increase the distance until you reach your usual level of activity.
- Ask family and friends for help with errands and chores (meals, groceries, cleaning, laundry).
- Do not lift more than 10 pounds (4 kg) for at least 6 weeks.
- You may start driving again when you are pain-free and no longer taking narcotic pain medication (check your insurance policy and coverage).
- Ask your surgeon when you may return to work. It will depend on your recovery and your type of work.
- When you are pain free, you may resume most activities, including sexual activities.



# When to call your doctor



Call your surgeon or go to the emergency room if:



Your surgical wound(s) becomes warm, red, or you see drainage coming from the incision.



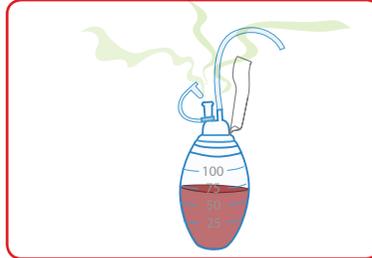
You have a fever (greater than 38°C / 100.4°F).



You cannot drink fluids or keep them down.



You have pain that your pain medicine does not help.



The liquid in your drain(s) becomes bright red blood or thick and foul smelling.



You have pain in your chest or trouble breathing.



If you cannot reach your doctor, go to the Jewish General Hospital Emergency Department.

## Contact information

Dr. Jean-Sébastien Pelletier or Dr. Tsafrir Vanounou:  
514-734-9969.

# Suggestions to help you stop smoking

## 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.

## Get more information from:

### **The Jewish General Hospital's Smoking Cessation Program**

514-340-8222 extension 23870

<http://jgh.ca/en/besmokefreegeneralinformation>

### **Quebec Lung Association**

514-287-7400 or 1-800-295-8111

[www.pq.lung.ca](http://www.pq.lung.ca)





**Pavilion K entrance:**  
5676 Légaré

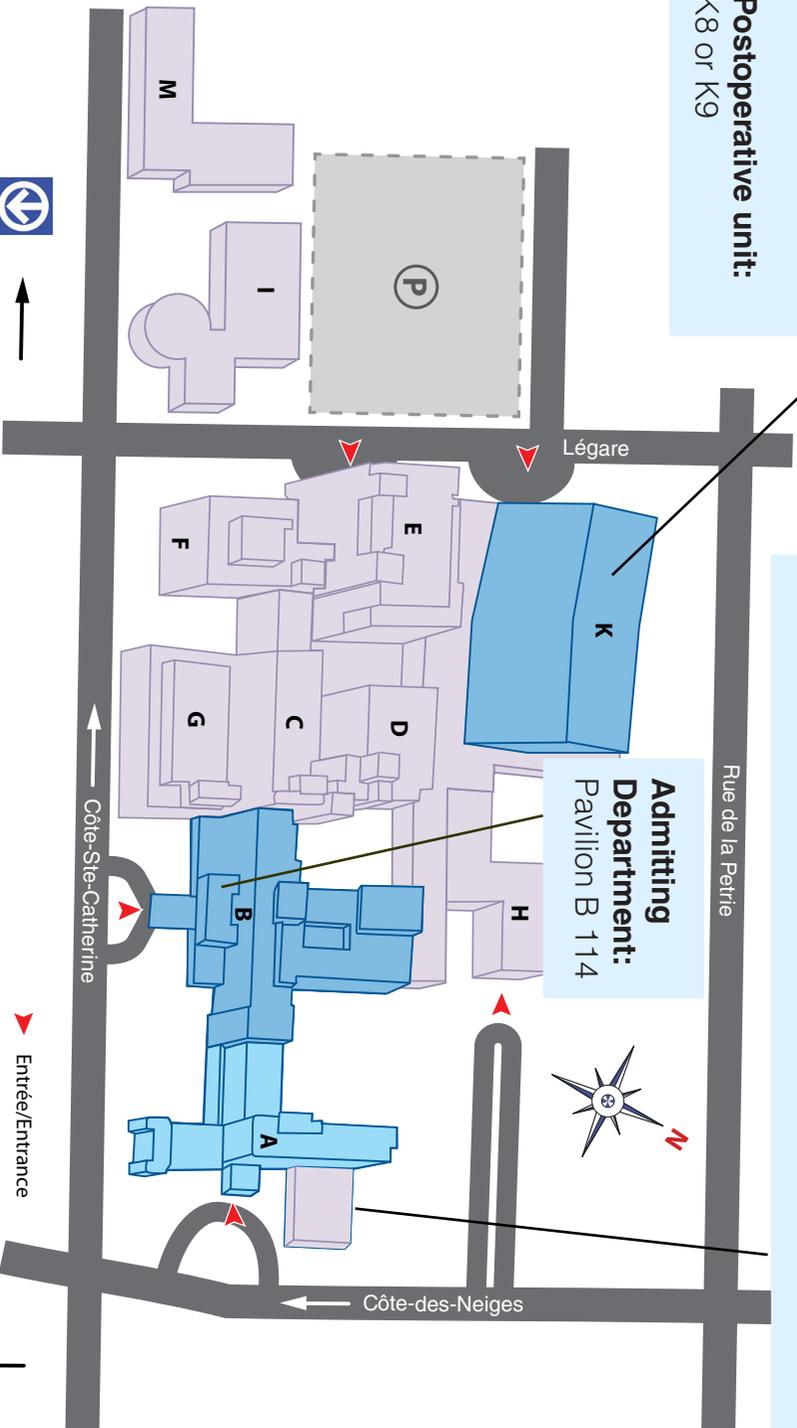
**Perioperative Unit  
and waiting room:** K1

**Postoperative unit:**  
K8 or K9

**Pavilion A entrance:**  
5750 Ch. de la Côte-des-Neiges Rd.

**Pre-Surgical Screening:** A605

**Surgical Clinic:** A500



Metro  
Côte-Ste-Catherine



Hôpital général juif  
Jewish General Hospital

3755 Rue Côte-Sainte-Catherine Road  
Montréal, QC H3T 1E2

Metro  
Côte-des-Neiges