A Guide to Knee Replacement Surgery

This booklet is to help you understand and prepare for your surgery. Please review it with the nurse and your family. Please bring it with you on the day of your surgery.

Centre de santé et de services sociaux de l'Ouest-de-l'Île
West Island Health and Social Services Centre
Important: Please Read

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
Introduction

What is the knee joint?

When you are admitted to hospital for your knee surgery you will be taking part in a Clinical Care Pathway (fast recovery program). The aim of this program is to help you recover quickly and safely.

The knee joint works like a hinge. The thigh bone called the femur in your upper leg is hinged to the shin bone called the tibia in your lower leg. The knee joint allows the shin bone to move backward and forward on the thigh bone so that you can bend and straighten your leg.

This booklet will give you information on how you can play an active part in your recovery and give you daily goals to achieve. Please review it with the nurse and your family. Please bring it with you on the day of your surgery.
What is a knee replacement surgery?

When the joint is worn out or damaged, the surgeon replaces the two surfaces of the joint, the lower part of the femur and the upper part of the tibia, with a femoral and tibia prosthesis.

Sometimes, the surface of the patella may also be replaced. We call this type of surgery an arthroplasty or a total joint replacement. The goal of the surgery is to reduce your pain and increase your mobility.
Before Your Surgery

Preparing for surgery

Plan ahead; make sure everything is ready for you when you go home after your operation. You may need help at first from friends or family, with meals, laundry, bathing, cleaning, etc.

Your CLSC _______________ will visit you at your home before your surgery. During this visit, your home will be assessed and recommendations made about the equipment you will need when you return home such as a walker, bath bench or others, and where to obtain them.
Arrange your living space to make life easier when you go home after your surgery. Here are some suggestions:

**Before Your Surgery**

- Put away non wall-to-wall carpets, area rugs and clear the space around your bed, in the hallways, in the kitchen and bathroom, so you can get around freely with your walker. Remove electric cords on the floor where you may walk. You may also need to move some furniture for a few weeks so you can move around safely.

- Get a good quality, non-slip bath mat for the shower/tub (sticky patterns in the tub are not sufficient) and another one for the bathroom floor. If you are not sure, the CLSC staff can give you some advice when they visit you at home.

- Get well-fitted shoes and slippers with soles that are not slippery or sticky.

- Stock the refrigerator and freezer. Think about preparing or buying frozen food in small portions that can easily be reheated until you are well enough to cook.

- Make sure you have a thermometer at home in case you would need to check your temperature after your surgery.

- Have an ice pack or a bag of frozen peas available to help with swelling and pain control.
We strongly suggest you stop smoking completely before your surgery.

Stopping smoking reduces the risk of lung problems after the surgery and helps the incision (cut) to heal.

Doctors can help you stop smoking by prescribing certain medications. Please discuss these options with your doctor.

Decrease your alcohol use. Alcohol can act together with medications. Do not drink alcohol 24 hours before surgery. Please let us know if you need help decreasing your alcohol use before surgery.

Discharge from the hospital is on the 3rd day after surgery, before 10 am. Tell the nurse as soon as possible if you have any worries about going home.

Please remember to organize transportation back home before 10 am in the morning.

The CLSC knows many resources in the neighborhood that you could use to make it easier for you. During their visits, either before or after your surgery, do not hesitate to share with them if you are having difficulties. They will help you find solutions. It may be also helpful to obtain the phone numbers of the resources below in case you might need them.

- Meals on wheels
- Caterers
- A grocery store that delivers
- Maid service
- General help
Speak Up

Patients must sign a consent form before going for a planned surgery. Signing a consent means that you are giving permission to your surgeon to proceed with the surgery. We encourage and want all our patients to participate in their care and ask questions.

Here are 3 simple questions that can help you get clear information and improve communication with your doctors and/or your nurses.

- What is my main problem?
- What do I need to do about it?
- Why is it important for me to do this?

Before signing your consent your surgeon must give you enough information so that you can make an informed decision.

It is not necessary or expected that you would receive every detail of the surgery. You need only the information that would be expected to make the best decision. This information should include the potential risks and the potential benefits.

If you have any questions please ask your surgeon. It is important that you understand your surgery.

As part of your preparation for surgery, your surgeon will have discussed with you alternatives to surgery, and what might happen if you decide not to have the surgery. If you have any questions, again it is important that you ask your surgeon and that you understand.

And finally the consent form will be signed and dated both by the surgeon and by you, the patient.
Exercise program before surgery

Exercise will help make your body as fit as possible before your surgery. If you are already exercising, keep up the good work. If you are not, start slowly adding exercise into your day.

Exercise does not need to be strenuous to be helpful; in fact, a fifteen-minute daily walk is far better than not exercising at all.

The following exercises are important to help strengthen your muscles and facilitate recovery after the surgery. Repeat each movement 10 times-3 times a day.

Ankle Pumping

With your legs straight and without moving your legs, lift your toes as far as you can and then, lower them as much as you can.

Strengthening of Thigh

Put the affected leg straight with a rolled up towel under the ankle, lift the toes toward you, and press your knee in the mattress, as tolerated.

Hold the position 5 to 10 seconds and relax.
Pre-operative visit

This is the first visit where the surgery and what to expect are explained. The staff will perform a general checkup to get an idea of your health.

During your pre-operative visit, you will:

• Have a blood test
• Have an ECG (electrocardiogram) if you are over the age of 40 or if you have any heart condition.
• Have an X-Ray of your knee
• Meet one of the physiotherapists who will review information that will help you get ready for surgery and your return back home after the surgery.

You will meet with a nurse who will review with you the instructions including what to expect during your stay in the hospital. Please discuss with the nurse any concerns you have about returning home. You will also meet with a doctor who will ask you questions about your health and health problems.

If there are any other medical problems that need attention, you may be asked to see another doctor before the surgery.

Some medications or herbal products need to be stopped a week or two before surgery. If not done so already you may ask your pharmacy to fax us your list of medication at the preoperative centre; fax number: 514-630-4875

If you have any further questions, you can contact the nurses of the Pre-operative clinic at (514) 630-2225, extension 1802 or 1804, Monday to Friday, from 1:00 PM to 3:30 PM.
Instructions: Day before surgery

The Admitting Department will phone you to let you know what time to come to the hospital.

You are usually expected to arrive 2 to 3 hours before your surgery is planned to start.

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

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

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

Room: Admission Department in the main entrance.

If you have any further questions, you can contact the nurses of the Pre-operative clinic at (514) 630-2225, extension 1802 or 1804, Monday to Friday, from 1:00 PM to 3:00 PM.
Cancelling your surgery

You must notify the nurse at the pre-operative clinic and your surgeon’s office if you notice any changes in your health; if you are not feeling well or become pregnant. You should also phone if you have a cold, flu, fever, any infection, including urinary tract infection, skin abscess, or infected ingrown toe nail.

If you need to cancel your surgery you should inform your surgeon. If you can not reach your surgeon or surgeon’s office, please call the preoperative clinic.

If you can not reach either of them, please phone the admitting department at (514) 630-2225 extension 1288.

Call to cancel if:

You are not well.

You need to cancel.

Please keep in mind that the Lakeshore General Hospital may need to delay or cancel your surgery because of an emergency. Your surgeon will reschedule your surgery as soon as possible.
Instructions
The nurse at the Pre-Operative Clinic will use the following pages to explain the best diet plan for you. Speak with your nurse to discuss any questions or concerns you might have.

Can I eat or drink before my surgery?

Do NOT have anything to eat or drink (including gum, water and candy) starting at midnight the night before your surgery.

You should stop eating at midnight but you are allowed to have carbohydrate drinks until your expected time of arrival to the hospital. (see page 15)

No diet drinks please.

If you are allowed to drink carbohydrate drinks in the evening and on the morning of your surgery until two hours before coming to the hospital, choose only one of the drinks on the next page and drink the amount suggested.

You do not need to choose the same drink for the evening and the morning.

You will notice an amount next to the drink you have chosen. Please try to drink this amount.
Try to drink the amount shown

- **apple juice**
  - evening before: 850ml
  - morning of: 425ml

- **orange juice (no pulp)**
  - evening before: 1000ml
  - morning of: 500ml

- **commercial iced tea**
  - evening before: 1100ml
  - morning of: 550ml

- **cranberry cocktail**
  - evening before: 650ml
  - morning of: 325ml

- **lemonade**
  - evening before: 1000ml
  - morning of: 500ml

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Stop drinking any fluids starting 2 hours before your arrival at the hospital.

For example, if you have to arrive at the hospital at 9am, do not drink fluids after 7am. EXCEPTION: if your time of arrival is between 6 and 6:30 in the morning you should stop drinking at 5:30 in the morning.
Before your Surgery

Take a bath or shower the evening before your surgery. Once clean and dry, use the first chlorexidine cloth to wipe the area that will be operated on. Make sure to wear clean pyjamas and have clean bed sheets the night before surgery. Before coming to the hospital the day of your surgery, use the 2nd chlorexidine cloth. Wear clean clothes.

Things to bring to the hospital

- This booklet.
- Your valid Medicare card.
- The Zimmer Brace if your doctor prescribed one for you.
- Any private insurance information you might have.
- Toothbrush, toothpaste, comb, deodorant, mouthwash, soap, Kleenex, shaving equipment, and perhaps earplugs.
- If you wear glasses, contact lenses, a hearing aid or dentures, please bring the appropriate containers with your name on them.
- If you use a cane, crutches or walker at home, please bring them to the hospital with your name on them.
- Your medication in their original containers.
- Someone to translate for you if you do not speak English or French.
- Please leave all jewelry, credit cards and objects of value at home. The hospital is not responsible for any lost or stolen articles.
- Bathrobe, slippers, pajamas, loose comfortable clothing.
Day of Surgery

At home

Please leave all jewelry, credit cards and objects of value at home. The hospital is not responsible for any lost or stolen articles.
At the hospital

Report directly to the Admission Services main entrance at the time given.

The admitting clerk will ask you about the kind of room you would prefer, and have you sign a general consent and admission forms.

Please keep in mind that it is not always possible to have a private or semi-private room. This depends on the availability of hospital beds on the day of surgery.

The nurse will help you to get ready for the surgery.

He/She will:

- Have you change into a hospital gown.
- Go through a checklist with you.
- Make sure your personal belongings are in a safe place.

When the operating room is ready, a patient attendant will bring you there.

You will then meet your anesthesiologist and the other members of the surgical team. The anesthesiologist will decide with you what type of anesthesia is best for you.
Waiting room

Family and friends can wait for you on 3 West, the surgical post-operative unit.
After your surgery

You will wake up in the Post Anesthesia Care Unit (PACU) before being transferred to your room. There are no visitors allowed.

You will have:

• An intravenous, to give you fluid and medications
• An oxygen mask. This should be removed before you are transferred to your room.
• You may have a urinary catheter

Your vital signs (pulse, blood pressure) will be checked often. Your nurse will verify the bandages (dressing) and ask you about your pain.

Your family and friends will only be able to see you once you are in your room.
Pain Control

Your anesthesiologist will be talking to you about the best way that we can relieve your pain while you are in the hospital.

Pain relief is important because it helps you:

- Breathe more easily
- Move more easily
- Sleep well
- Recover faster
- Eat better
- Do things that are important to you
- Do your knee exercise program

You will be asked to rate your pain on a scale from 0-10, our goal is to keep your pain score below 4/10.

**Do not wait until the pain gets too bad before telling us.**

You will not become addicted to pain medication given to you for surgical pain.

Always tell the nurse if your pain is more than 4 on the pain scale (where 0 is no pain and 10 is pain as bad as you can imagine). This will help the nurse decide how to best manage your pain.
Exercises

Deep breathing and coughing exercises

The inspirometer is a simple device that makes you breathe deeply, to prevent pneumonia.

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

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

• Repeat this exercise at least 10 times every hour or more often if you can, while you are awake.

• Then take a deep breath and cough.

• Deep breathing and coughing exercises will help prevent pneumonia.
In Your Room

1. With the nurses help, you will get up and sit in a chair.
2. Start your breathing exercises to help prevent pneumonia and other infections of your lungs.
3. Do your leg exercises as described on page 28

Meals
If you are not nauseous, you should be able to have liquids and then go back to your normal diet.
After your Surgery

One day after surgery

Pain
Tell your nurse if you are having pain greater than 4/10 on the pain scale.

Activities:
- With assistance, you will get up and walk 2 times today to the door of your room and back to your chair.
- With help you should walk to the bathroom and not use the bedpan or the commode.
- Be out of bed, for most of the day.
- Do your breathing exercises at least 10 times every hour while awake.
- You might have an x-ray of your knee.

Meals:
You should be able to go back to your normal diet today.
You should drink adequate amounts to prevent constipation.

DO NOT leave a pillow or rolled up towel under your knee.

* Plan to go home in 2 days.
After your Surgery

Two days after surgery

**Pain**
Tell your nurse if you are having more than 4 on the pain scale.

**Activities:**

- With assistance, you will get up and walk at least 2 times today. You should be walking longer distance than yesterday. With help, you should walk to the bathroom and not use the bedpan or commode.
- With assistance, practice how to transfer from your bed to the chair.
- Be out of bed, for most of the day.
- Do your breathing exercises at least 10 times every hour while awake.
- You may be shown how to use the stairs today.
- If the xray of your knee was not done yesterday, you will have one today.

_You may put weight on your knee as tolerated._

**Meals:**

Continue to eat your normal diet.
Sit in the chair for all your meals.

DO NOT leave a pillow or rolled up towel under your knee.

* Plan to go home tomorrow morning before 10am.
After your Surgery

Three days after surgery: Going Home

Pain
- Tell your nurse if you are having more than 4 on the pain scale.

Before you go home the nurse and the physiotherapist will go through your exercise program and review the discharge instructions with you.

The nurse will review with you how to safely use your pain medications when leaving the hospital and when at home.

The nurse will also give you your follow up appointment with your surgeon.

In order to be discharged home you will need to be able to get in and out of bed, walk to and use the bathroom and negotiate the stairs (if you have stairs at home).

Follow-up appointment after surgery

Surgeon’s name: __________________________________________________________

Appointment Date and Time: ______________________________________

Plan to go home today before 10:00 a.m

Review the discharge instructions with the nurse before leaving.

If you are unable to leave the hospital at this time, you can wait in the patient’s sitting room located on each unit. We need to prepare your room for the next patient.

Summary

By doing your deep breathing exercises, eating well, being out of bed and doing your knee exercises, research has shown that you will recover quicker. You are less likely to develop any lung infections or circulation problems. By avoiding these problems, you are more likely to go home sooner and feel better faster.
Your Exercise Program After the Surgery

The physiotherapist will choose the correct exercises for you. It is important to follow the physiotherapist’s recommendations to help your recovery.

Avoid any twisting movements or jumps.
Do not overwork your knee.

Do the exercises 3 times a day.
Repeat each exercise at least 10 times and gradually increase the number of repetitions, as tolerated.

The goal is to bend your knee to 90 degrees and to completely straighten the leg the first week. It is important to do the exercises slowly and to relax between each exercise.

As soon as you stand up, try to divide your weight equally on both legs.

☐ Ankle Pumping

With your legs straight and without moving them, lift up your toes as much as you can, and then point downwards, as much as you can. Repeat __ times.
After your Surgery

☐ Strengthening of thigh

With your leg straight and a rolled up towel under your ankle, lift your toes toward you and press your knee down into the mattress. Hold 5-10 seconds and relax.

Repeat __ times.

☐ Knee Extension

While lying down, place a rolled up towel under your knee. Lift your foot and straighten your leg, without lifting your knee off the towel. Hold 5-10 seconds and put your leg back down. Repeat __ times.
**Knee Extension - sitting**

Sit down on a chair that has a hard surface (seat), and straighten your leg, lifting the foot as high as possible, without lifting your thigh from the seat of the chair. Hold 5 to 10 seconds. Repeat __ times.

**Knee Flexion - sitting**

Sit down and bend the operated knee, pushing your heel backwards. You can use the other leg to help yourself. Bend your knee until you feel a stretch on your knee and hold 5 to 10 seconds.

Repeat __ times.
**Squat Strengthening**

Stand up with your hands leaning on your walker or furniture to keep your balance, your feet shoulder width apart and your weight spread evenly on both your legs. Bend your knees slightly while leaning forward. Do not do deep squats. Hold 5 to 10 seconds.

Repeat ___ times.
Preparing To Go Upstairs

Stand up with your hands resting on your walker or furniture to keep your balance. Lift your knees, one after the other, as if you were about to go up a stair. Hold 5-10 seconds.

Repeat ___ times.

Strengthening of the Quadriceps

Stand up with your back against the wall, feet apart and your hands resting on your walker to keep your balance. Spread your weight evenly on both legs. Try to touch the wall with your knee. Put a towel behind the knee- hold 5-10 seconds.

Repeat ___ times.
At Home

Your CLSC will contact you to organize a visit once you are back home. If they haven’t, please contact them.

Pain

Pain should not get in the way of your exercises.

• Plan to take your pain medication as prescribed before you exercise. This should help you do your exercises with less pain.

• After each exercise session, if you have pain, you may also apply ice on the operated knee for about 15 minutes. Put the ice in a plastic bag, wrap the bag with a dry cloth (do not place directly on the skin) in order to decrease pain and inflammation.

• You may put the ice every 2 hours for 15 minutes, as needed.

• Please track your pain levels at home using the Pain Diary found on page 39.

Constipation

Decreased mobility causes constipation.

Some pain medications can also cause constipation. If constipation becomes a problem, increase the amount of fluids you drink, add more whole grains, fruits and vegetables to your diet and continue to exercise and walk regularly.
Walking, Exercising and Your Activities

Walking is an excellent exercise. You will start walking at the hospital with help from staff. Your endurance will gradually increase. Walk short distances several times a day.

You should use the support of walking aids such as a walker or cane until your leg is stronger. If you use a cane, it should be used on the opposite side from the operated leg. This will be confirmed before you leave the hospital.

Stairs:

To go up:
Put the good leg on the step first. Then, bring the operated leg, the crutches or the cane at the same time, on the same step.

To go down:
Put the operated leg and the crutches or the cane on the step first. Then, put the good leg on the same step.
At Home

Household chores:
To carry objects, use an apron with large pockets, a knapsack or a basket attached to your walker.

Traveling and driving:
If you travel by car, plan to stop every hour and walk around to help blood circulation in your legs. At the follow up appointment, the doctor will tell you when you can start driving again.

Going back to work and sport:
Please wait for your surgeon’s permission to go back to work or before resuming sport activities.

Life expectancy of the prosthesis:
The life expectancy of the prosthesis varies. Several factors, including maintaining a healthy weight can influence how long the prosthesis will last.

Dentistry or other surgeries:
If you require surgery or dental work please notify the surgeon or dentist that you have a knee prosthesis. It may be necessary to prescribe an antibiotic to avoid infection.
Your Incision

The CLSC nurse will remove the clips. We will notify them when to remove these.

Washing and showering

You may take a shower before your clips are removed but with a covering in place. Your physician will let you know.

In general, patients have to wash at the sink for a few days. You will be able to take a shower 24 hours after the clips have been removed and the incision stops draining. Ask the CLSC nurse if you are unsure when to start taking showers.

24 HOURS AFTER THE REMOVAL OF YOUR CLIPS

We recommend that you use a handrail to take a shower during your recovery.
When to Call Your Doctor

Complications do not happen very often but it is important that you know what is normal and what to look out for.

**Phlebitis (blood clots)**

You have an increased risk of forming a blood clot after surgery. It is very important to do your exercises and to get up and move as much as you can after surgery to prevent blood clots.

Phlebitis is an inflammation of the veins, which can block blood circulation.

A blood clot can cause inflammation in the vein. In order to prevent phlebitis, you will receive a prescription for medication to take after your surgery.

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**Infection**

If your incision (cut) is painful and red and/or your temperature is above 38 degrees Celsius or 100 degrees Farenheit for 2 days in a row please phone your surgeon’s office.

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Call your surgeon, the nurse from the CLSC or come to the Emergency Room right away if you notice any of these signs anywhere in either leg.

- redness
- swelling
- warmth or pain
Important Resources

If you have any questions, please contact us. (514) 630-2225 extension 1799

Lakeshore General Hospital Orthopedic clinic is located on the ground floor in Ambulatory Services area near the main elevators.

The following links might be useful

If you would like to know more about knee surgery visit the Mayo Clinic:

http://www.mayoclinic.com/health/knee-replacement/MY00091

If you would like to know more about anesthesia:

http://www.cas.ca/english/patient-information

If you would like to know more about tips on getting fit:


http://www.canorth.org

If you would like to know more about tips on quitting smoking, the following links might be useful:


http://www.pq.lung.ca/services/poumon-9/quit-cesser/

the Quebec Lung Association

www.pq.lung.ca

Montreal Chest Hospital

www.muhc.ca
Frequently Asked Questions

How long will my knee be swollen?

- Expect your knee to be swollen for the first few months after surgery.
- It will gradually diminish over several months.
- It is normal that your knee swell up after exercises so make sure you keep your leg elevated after you exercise.

What kind of physical activity is safe before surgery and also good to continue after your surgery?

- Walking is the best and safest exercise.
- It helps to increase flexibility, blood circulation and strength to your knee. Swimming or aqua therapy is also a good activity but make sure your knee wound is healed (check with your surgeon or your nurse). Biking (regular or stationary bike) will also help increase and maintain your knee bending.

When can I expect to return to work?

- You can return to work as soon as you are comfortable to do so. You should discuss this with your doctor before or after the surgery.

When can I expect to drive again?

- If it is your left leg, you can drive an automatic transmission vehicle as soon as you are comfortable. If it is your right leg, it is not safe to drive until you have full control of your leg so that you can move from the gas pedal to the brake quickly. This can take a variable amount of time, but is usually about 4 weeks. You must not drive until you are no longer taking narcotics.
# Pain Diary

Using the Pain Intensity Scale and table below, enter the level of pain you feel during the day.

## For example:

<table>
<thead>
<tr>
<th>Days After Surgery</th>
<th>Morning</th>
<th>Noon</th>
<th>Evening</th>
<th>Night</th>
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<tbody>
<tr>
<td>1</td>
<td>4/10</td>
<td>4/10</td>
<td>3/10</td>
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## Pain Intensity Scale

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<tr>
<th>Pain Intensity Scale</th>
<th>No pain</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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anterior (front) view
Help Us Help Others

Help support the MUHC Patient Education Office! Donations make a huge difference. They help us create health information materials and programs to deliver the best care for life. All patient materials are freely available on the internet to MUHC patients, and to patients and families everywhere.

Make a donation through the Montreal General Hospital Foundation to:

Online: mghfoundation.com

By Phone: 514-934-8230

In Person / By Mail: 1650 Cedar Avenue, room E6-129
Montreal QC, H3G 1A4

Thank you for your support!
MUHC Patient Education Office: muhcpatienteducation.ca