



Regaining your quality of life: STEP-BY-STEP

Hip Fracture

Patient's Name:

File number:

- ☐ We recommend that you begin reading this document as soon as possible.
- ☐ Prepare for each scheduled appointment by reading the appropriate section and completing the related tasks.
- ☐ Periodically review this document before, during and after your hospital stay.
- ☐ Bring this document with you at every appointment with a health care professional or health care team.

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YOUR PROGRAM AND GENERAL INSTRUCTIONS

Hospital discharge: Expected date: _____ Time of departure: 2h after the announcement

Get staples removed on: _____

Stop taking anticoagulants on: _____

Follow-up appointment with the orthopaedic surgeon at the Orthopaedic Clinic:

Date: _____ Time of scheduled appointment: _____

Where to go: 1st floor, Wing “C”, Hôpital de Hull, CISSS de l’Outaouais

For more information, please contact the appropriate professional to answer your question, Monday to Friday:

- Universal access desk CLSC **819-966-6531**
- Occupational therapist, physiotherapist: 8:00 a.m. to 15:30 p.m. **819 966-6047**
- Orthopaedic Clinic nurse/orthopaedic surgeon: 7:30 a.m. to 3:30 p.m. **819 966-6200**
ext. 333967

INTRODUCTION

Your orthopaedic surgeon performs a surgery to treat your hip fracture. This guide is an information and teaching tool. Its objective is to adequately prepare you for your surgery as your active participation and involvement are key to the success of the operation.

Several practitioners (nurses, physiotherapists, occupational therapists, physicians) will help you with your rehabilitation and with resuming your daily activities. Other consultants (social worker, dietitian) will visit you, as required. Your recovery will depend on your state of health, your motivation, **your personal efforts** and your ability to resume your normal activities. You will have to ask someone to help you and accompany you, and that person will become **your personal motivator, your coach**.

The advice provided in this document is for reference only. The professionals involved in your care will provide you with customized, timely instructions. Don't worry if you are often asked the same questions during your visits at the hospital; this is normal procedure, as each professional must individually evaluate your state of health in order to establish your individualized and customized care plan with you.

In this document, a square □ precedes the "things to do or to avoid" after your surgery. You should regularly consult the list of things to do.

□ **You must read this document regularly, during and after your stay in the hospital. Therefore, you must bring this document with you at each visit with the care team, including the morning of your surgery.**

YOUR ROLE

Beyond the expertise of your orthopaedic surgeon, **you play the most important role** in your surgery and your recovery.

Asking questions about the surgery, your stay in the hospital and your return home will help to alleviate your fears and increase your motivation, confidence and participation in your personal recovery when you return home.

The first step of your preparation will be to identify someone close to you who will be able to accompany you to your various appointments and help you through the whole continuum of your surgery, from your surgery to your convalescence.

You should be aware that your needs following surgery will be different than your needs prior to surgery, and these may be temporary or permanent. Therefore, you must prepare yourself for the possibility of modifying your living environment. We will guide you through all the steps of this adventure, but you must be at the heart of the process, understanding what is expected of you, actively participating and following through.

If no one will be available to assist you upon your return home after surgery, it may be necessary to move in with a relative who can take you in during your convalescence period, until you are able to return home.

THE ROLE OF YOUR COACH

This support person will accompany you throughout the process, from your surgery to your return home. She will encourage you in your daily activities and in your exercises. She will be your memory, your escort, your trainer, your motivator and your support. She could stay with you when you return home, perhaps for several days. Her presence could be continuous at the beginning, and then be reduced gradually according to your condition and your needs. She could run errands (bank, groceries...), given that you won't be able to drive your car for 8 weeks or more, prepare meals, help with housekeeping, etc. **This person will be your guide, but will not do what only you can do.**

If your mother tongue is not English or French, it is even more important for you to be accompanied by a person whom you trust. This person can communicate on your behalf with the care team.

We recommend you be accompanied by **only one person**, ideally **your coach** or, on occasion, their replacement. This way, you will be supported and have the reinforcement required to better understand all the information that we will provide throughout the process. You can consult them if necessary.

IMPORTANT INFORMATION ABOUT HIP FRACTURES

A hip fracture is most often a symptom of one or more medical problems. Therefore, it is important to determine the cause in order to prevent other fractures. To this end, we will begin the necessary examinations during your hospital stay or we will ask that certain examinations be performed after your discharge. We will also give you tips on preventing falls, the layout of your home and healthy lifestyle habits.

DURATION OF HOSPITAL STAY

Planning your discharge from hospital begins as soon as you arrive at the emergency room. At every step of your pathway (hospital stay), we will ensure that your discharge plans are maintained.

The duration of your hospital stay will depend on your health and your recovery. For most people who undergo surgery such as yours, **the duration of stay is 1 to 10 days**. If your state of health requires supplemental care, it will be provided by the care team.

THIS IS THE CONTINUUM PROPOSED FOR ALL PHASES OF THE CARE PLAN:

PHASES	ACTORS	OBJECTIVES	YOUR REHABILITATION
HOSPITAL Duration of Stay: 1 to 10 days	You and your coach	Collaborating with the care team. Performing all required exercises. Maintaining constant communication with the care and medical teams. Preparing your home for your return home.	
	Orthopaedic Unit	Receiving you when your medical condition is stabilized. Providing, jointly with the rehabilitation team, postoperative care and support, such as: reducing pain as much as possible, encouraging your mobilization, treating your wound. Screening and preventing complications. Starting the assessment of fracture or fall risk factors and starting a treatment plan for known causes. Preparing for your return home.	
POST-HOSPITAL	You and your coach	Performing all required care and exercises. Fostering optimal recovery of your function. Ensuring prevention and monitoring of complications. Maintaining constant communication with the care and medical teams. Preventing fracture or fall risk factors.	
	Home Support	Ensuring support and follow-up of your physical condition, as required. Continuing your rehabilitation	
	Outpatient Physiotherapy	Continuing your rehabilitation, if required.	
	Orthopaedic surgeon	Providing follow-up of your surgery.	
LIVING AFTER A HIP FRACTURE AND PREVENTING OTHER FRACTURES	Family doctor	Continuing the assessment of your fracture or fall risk factors, polypharmacy, your chronic illnesses.	
	You and your coach	Following the advice provided. Continuing the exercise program and adopting a healthy lifestyle. Optimizing your health and your physical condition.	

THE HOSPITAL PHASE

PHASE	ACTORS	ACTIVITIES
HOSPITAL Duration of Stay: 1 to 10 days	You and your coach	Collaborating with the care team. Performing all required exercises. Maintaining constant communication with the care and medical teams. Preparing your home for your return home.
	Orthopaedics Unit	Receiving you when your medical condition is stabilized. Providing, jointly with the rehabilitation team, postoperative care and support, such as: reducing pain as much as possible, encouraging your mobilization, cleaning the surgical site. Screening and preventing complications. Starting the assessment of fracture or fall risk factors and starting a treatment plan for known causes. Preparing for your return home.

YOUR INVOLVEMENT AND YOUR COACH'S INVOLVEMENT

Your participation in this phase has three main objectives:

1. Collaborating with the care team.
2. Performing all required care and exercises.
3. Maintaining constant communication with the care and medical teams.

Your mobility will be reduced after surgery. To prepare for a safe return home, it is important to plan the items on the following checklist. Your coach can see to this.

Checklist: Things to do to prepare your home return to optimize your stay in the hospital

- ☐ Make sure your coach or a family member or a friend will provide minimal support when you return home.
- ☐ Ask someone to do your housework.
- ☐ Make sure you have all the food you will need when you return home. Ask someone to buy or prepare in advance meals that you can freeze and later reheat in the microwave. Obtain a list of grocery stores offering home delivery and/or Internet ordering.
- ☐ Since you will not be able to drive for 8 weeks or more, make arrangements for your transportation upon hospital discharge and to and from your appointments.
- ☐ Obtain a list of pharmacies offering a delivery service.
- ☐ Ask someone to arrange your home as per the recommendations on page 49. If you have any doubts, talk to the occupational therapist in the Orthopaedic Unit to determine whether a professional needs to assess the safety of your home. Ask someone to arrange a bathroom, as required, with all the necessary equipment and no

- ☐ slippery surfaces, as per the recommendations on page 47 or based on the advice of your occupational therapist.
- ☐ Plan for housekeeping during your convalescence, from lawn mowing in the summer to snow removal in the winter.
- ☐ Find someone to keep or take care of your pets.
- ☐ Read and follow the advice in the “Preventing Falls” section on page 69.
- ☐ Obtain the equipment suggested by the care team (see list of equipment). Make sure to have the equipment at home before your hospital discharge. Do you have private insurance covering this type of equipment? Check with your insurance company and, if necessary, ask for a prescription from the care team.
- ☐ Ask someone to pack your bag for your stay in the hospital (**identify your personal items with a label**):
 - o Your personal items (toothbrush, comb, shampoo, soap, box of facial tissues, shaving kit, etc.).
 - o Sleepwear, a robe, underwear, comfortable shoes or slippers with Velcro fasteners, non-skid soles and closed heel and toe (purchase them, if necessary). After surgery, your feet might be swollen, so make sure your shoes or slippers are not too tight.
 - o Loose-fitting, comfortable clothes (jogging suit, pyjamas, socks), so you can do your exercises more comfortably.
 - o Your walker, if you own one. Do not forget to clearly identify it with a label.
 - o Electronic audio/video devices are authorized, but must be used with headphones.
 - o Pencil, notebook.

THE ORTHOPAEDIC UNIT

The interventions by the care team working on the Orthopaedic Unit have five main objectives:

1. Admitting you when your medical condition is stabilized.
2. Providing, jointly with the rehabilitation team, postoperative care and support, such as: reducing pain as much as possible, providing appropriate care for your surgical wound and encouraging you to perform your exercises and resume your activities.
3. Screening and preventing complications.
4. Starting the assessment of fracture or fall risk factors and starting a treatment plan for known causes.
5. Preparing for your return home.

In your room

- ☐ On the evening of the surgery, ask your coach to bring to your room: your bag and your walker, if you own one.
- ☐ You must change your position in bed every 2 hours.
- ☐ Your orthopaedic surgeon will prescribe your regular medication.
- ☐ You can accelerate the return of intestinal peristalsis by moving and taking regular walks.
- ☐ You will be prescribed anticoagulants (medication to thin the blood and prevent the formation of clots) for a few days to a few weeks after your surgery (the period may vary depending on your predisposition to thrombophlebitis). If you are not taking anticoagulants orally, they must be self-administered (by yourself or your coach)

subcutaneously, and we will be with you when you perform your self-injections. Refer to the “Self-Injection of the Anticoagulant” section.

- ☐ You must do your respiratory exercises regularly every hour.
- ☐ You must do your circulatory exercises regularly every hour.
- ☐ You must do your mobility and strength exercises regularly, as you were taught by the rehabilitation team (3 times a day).
- ☐ You must walk as much as possible.
- ☐ You should ask for ice and analgesic medication as soon as you feel the need. Don't wait until your pain reaches severe intensity.

When you arrive at the care unit

- The nurse will regularly evaluate your blood pressure, pulse, and breathing. She will check your surgical site dressing (bleeding), temperature, sensitivity and mobility of the operated limb in order to monitor and prevent potential complications. She will give you specific medication related to your surgery, such as pain medication.
- You will have an IV (intravenous) fluid and/or a venous access device to hydrate you and to administer certain medications intravenously.
- You may also have a urinary (bladder) catheter to allow drainage of your urine.
- You may be able to drink clear liquids and eat a light snack (toast...).
- You will be told how much weight you can put on your leg when you're standing or walking.

Your stay in the care unit

- The nursing staff delivers the required care and treatments specific to your type of surgery and your health needs. They will do what is necessary to make you comfortable. They will give you instructions that you must follow. Do not hesitate to ask them any questions and let them know about your concerns.
- Your nurse will change your dressing within 24 to 48 hours following surgery. She will explain the surgical site care and dressing change procedure so that you can take over when you return home.
- **If your condition permits**, the nursing staff will help you stand on the very day of your surgery or, at the latest, the next day. You can walk to the chair, then progressively further, with the help of a walker. The staff will guide and teach you the instructions to prevent problems and complications. **Don't stand up alone before we tell you it's safe to do so.**
- Depending on the time of your arrival on the care unit, the rehabilitation team will begin your rehabilitation on the day of your surgery or on the following day, so that you can recover your mobility and resume your regular life as soon as possible.
- The day following your surgery, you will wash up with the help of the patient attendant.
- You will resume your regular diet, unless you feel discomfort caused by nausea.
- Your operated limb will swell rapidly after surgery. It will stay this way for a period of 2 to 4 months. Therefore, you will be encouraged to do the circulatory exercises, to mobilize your hip, and to apply ice on the surgical site. Various other options can also be considered, depending on your condition: anticoagulants (medications), anti-

embolism (compression) stockings to help prevent thrombophlebitis, and a device installed around your leg to apply intermittent compressions and a mechanical pumping effect which also helps to prevent thrombophlebitis.

- If you are not prescribed oral anticoagulants, your nurse will bring you your anticoagulant syringe to perform your self-injection every morning. She will watch each of the steps to ensure that you perform them safely.
- You will receive regular visits from the specialized surgical nurse (IPAC). She will monitor your progress and will contact your surgeon, if necessary.

You have now embarked on the path to recovery, where our priorities will be: ¹

- Ensuring your comfort
- Ensuring your healing
- Ensuring your recovery

To do this, the essential elements are:

- Reducing your pain as much as possible
- Providing proper care for your surgical site
- Screening and preventing complications
- Starting the assessment of fracture or fall risk factors and a treatment plan for known causes
- Preparing for your return home

REDUCING YOUR PAIN AS MUCH AS POSSIBLE²

Reducing pain as much as possible is an important element of your healing process. If your body is stressed because of pain, your healing will take more time, your functional abilities will be more limited, your sleep will be altered and your mood will be affected. Each person is unique with regard to the most efficient ways of alleviating pain. To determine the treatment that is most suitable for you, it may be necessary to try various combinations of medications (narcotics) or various dosages.

Here is what you can do to reduce your pain.

- ☐ Discuss your pain with the health professionals, so that they can determine the amount, location and the type of pain you are experiencing. A standard method of measuring pain is to evaluate it on a scale of 0 to 10, where 0 means no pain and 10 means the worst possible or imaginable pain:

Absence of pain	Minimal	Light	Moderate	Severe	The worst imaginable
0	1	2	3	4	5
6	7	8	9	10	

- ☐ By describing your pain, you will help your care team better understand its nature and select the most appropriate treatment. Words such as “continuous pain,” “stinging sensation,” “burning sensation,” or “throbbing pain” are useful in describing pain.

¹ Planning for Maximal Results: Preparing for Your Surgery. Canadian Orthopaedic Foundation. www.canorth.org

² Ibid

- ☐ Following instructions with regard to positioning will also allow you to exercise some control over your pain.
- ☐ Do your exercises. Move, change positions, walk.
- ☐ Apply ice after your exercises.
- ☐ Practise the relaxation technique.
- ☐ When they stop using regional anesthesia, you will continue taking analgesic medication orally. **Don't hesitate to ask for your analgesic medication (not necessarily at the scheduled times)**, so that pain will not delay your functional recovery. Pain rated at 5/10 or less is acceptable on the first day after surgery, and 3/10 or less on the following days.

During the immediate postoperative phase, some methods can be used to control surgical pain: Regional epidural anesthesia (in the back), oral medication.

PROVIDING PROPER CARE FOR YOUR SURGICAL WOUND

- You have a 4 to 6-inch (10 to 15 cm) incision on your hip, closed by sutures or clips, and covered by a dressing. **It is normal to see a bruise appear at the hip and the thigh.**
- Your dressing will be removed 2 days after the operation. The nurse will apply another dressing to cover the incision.
- This dressing will be changed again before you leave or more frequently, if necessary.
- After your discharge, follow-up of your surgical wound will be done by the CLSC nurse.
- The nursing care staff will give you instructions concerning the care of your surgical site. Don't hesitate to discuss any uncertainties or misunderstandings.

Wound closed with clips:

- ☐ You can apply a compress (gauze) held in place using adhesive tape to cover your wound for comfort only or to protect it against chafing from rubbing on clothing.
- ☐ The CLSC will perform the removal of clips approximately 10 to 14 days after your surgery. After the clips are removed, maintain a dry dressing (gauze) until fluid no longer seeps out at the clips' entry points.

To provide proper care for your surgical wound, here is what you should do.

- ☐ Always wash your hands before touching the surgical site area.
- ☐ Perform self-care of the surgical site / wound as you have been taught by the nursing care staff.
- ☐ On the date specified by the surgeon, have your stitches, clips or sutures removed (if you have them) at the designated facility (probably your CLSC).
- ☐ Watch for signs of infection or other complications; **contact the CLSC nurse or Info-Santé at 811, if you experience one or more of the following signs or symptoms:**
 - **Redness spreading beyond the edges of the wound or surgical site;**
 - **Fever above 38 °Celsius or 100 °Fahrenheit;**
 - **Unusual coloration or discharge, including pus;**
 - **Unusual tenderness or swelling.**

- ☐ Even after clips or Steristrips are removed, it is important to look after the wound area. You must gently wash the surgical wound with mild soap, rinse it thoroughly with clear water, and then pat it dry carefully **without rubbing**. ***Taking a shower or a bath is not permitted if your wound oozes or weeps.***
- ☐ You must also protect the area against any injuries for at least four weeks.

SCREENING AND PREVENTING COMPLICATIONS ³

Any surgery entails the risk of complications, even after the best preparation possible; they are rare, but possible. Your responsibility consists of following the instructions given to you by the care team and your physician, as well as recognizing potential complications. This way, you will contribute to preventing and reducing them.

Nausea

Nausea is the most frequent postoperative complication. If nausea and vomiting persist, certain medications can be administered. If you are receiving epidural analgesia, nausea is one of the side effects you would normally experience. To prevent or reduce this complication:

- ☐ Take your medication with food to protect your stomach.

Constipation

Postoperative constipation can be associated with a change of diet, reduced physical activity and the use of sedatives to alleviate pain. Sedatives tend to inhibit intestinal function. Medications to counter constipation are prescribed during your stay in the hospital, and you could continue to use them at home. To prevent this complication:

- ☐ It is advisable to adhere to healthy eating habits that promote regularity. Introduce high fibre foods in your regular diet: whole-grain breads and cereals, bran, legumes (lentils, dried peas...), fruits and vegetables, unless you are following a special diet.
- ☐ Adequately hydrate yourself: drink 1.5 to 2 L of water a day in order to optimize the efficiency of dietary fibres, unless you are subject to fluid restriction.
- ☐ Move as soon as possible and as much as possible as per recommendations of your health care team.

Swelling

Your operated leg will remain swollen for several weeks or months after your surgery. This is normal, and will often vary depending on the type of activities you do. To reduce swelling:

- ☐ Elevate your operated leg (ideally 20 to 30 cm (8 to 12 inches) above the level of your heart) to an inclination of approximately 15° (a single pillow under the calf, without bending your knee).
- ☐ Avoid remaining seated for long periods of time.
- ☐ Do your circulatory exercises (see relevant section) in order to maintain blood circulation.
- ☐ Apply an ice bag on the surgical site for the first few days, in order to contain swelling.

³ Planning for Maximal Results: Preparing for Your Surgery. Canadian Orthopaedic Foundation. www.canorth.org

Urinary retention

Urinary retention is a frequent problem after any type of surgery, but things return to normal after a few hours or a few days. To solve this problem, it may be necessary to insert a catheter (tube) into your bladder in order to drain the urine. The catheter can remain in place for a few hours or a few days, or it can be removed immediately after the bladder has been drained.

Blood clots, phlebitis, and pulmonary embolism

Following surgery, blood clots can form in the deep veins several hours or several weeks after a surgical procedure, usually because of the lack of movement. These clots could break off and make their way to the lungs (pulmonary embolism) or block the circulation in your legs (phlebitis), which would entail serious risks for your health. The following individuals run the risk of developing blood clots: people with a history of phlebitis or pulmonary embolism, heart problems, circulatory problems or other health problems, such as diabetes, who are inactive and overweight.

Symptoms of thrombophlebitis are: persistent pain in the legs (calves), increasing with activity or in touching the calf, with or without swelling, with or without redness.

To prevent thrombophlebitis you must also:

- ☐ Stand up as soon as possible, with the help of the nursing staff;
- ☐ Move your feet and ankles every hour (see the section on circulatory and respiratory exercises);
- ☐ Wear your support or compression stockings (if worn prior to surgery or if they were prescribed);
- ☐ Take anticoagulants as per your surgeon's prescription (if necessary, refer to the section on "Self-Injection of the Anticoagulant").

Anemia

You can lose a significant amount of blood during this type of surgery. Blood loss can cause a reduction of your blood hemoglobin level, a condition referred to as anemia. In order to produce hemoglobin, your body needs iron. Hemoglobin level can be measured through a blood analysis. This will be tested after the operation. If your hemoglobin level is too low, you may feel weak and dizzy, out of breath, very tired, or you may experience nausea or headaches. Therefore, you may need a blood transfusion and you may also be given iron supplements.

Here is how to avoid thinning of the blood and the need for a blood transfusion.

- ☐ Follow Canada's Food Guide to ensure healthy nutrition. Heme iron of animal origin (meat, poultry, fish, liver) is much better absorbed than non-heme iron from vegetable sources (lentils, chickpeas, enriched cereals, nuts and seeds, greens). Iron from vegetable sources will be better absorbed if taken with food rich in vitamin C (kiwi, pineapple, orange, strawberries, red/orange/yellow peppers)
- ☐ If you have a history of anemia, you should consult your physician or dietician in order to evaluate the relevance of an iron supplement.

Postoperative confusional state (delirium)

Sometimes, some individuals can experience a confusion period after surgery. For example, they might start forgetting things, talk differently, seeing, hearing or believing things that make no sense. This is temporary and will cease within a couple of days, or, occasionally, a couple of weeks. There are multiple factors that can contribute to this phenomenon, for example medication or anesthetic side effects, lack of sleep, pain, infection, alcohol withdrawal, constipation and low oxygen level.

To reduce the possibility of this complication occurring, you must:

- ☐ Have the items found on your nightstand brought to you: photos, alarm clock, reading materials, etc.
- ☐ Use the appropriate relaxation technique in order to alleviate lack of sleep and manage your stress.
- ☐ Limit your consumption of alcohol.
- ☐ Limit your consumption of analgesic medications.
- ☐ Hydrate yourself properly and maintain a healthy diet.
- ☐ Ensure proper intestinal function.
- ☐ Inform the care team if you had this problem before with a previous surgery.
- ☐ Wear your eyeglasses and/or hearing aid soon after surgery.

Infections

Less than 1% of patients develop wound infections after surgery. However, infection is a very serious complication when it occurs. Prevention is the key. The onset of infection can occur in your joint during surgery or during your stay in the hospital, or it may be caused by bacteria coming from another part of your body. You will run a higher risk of developing an infection if you are eating inadequately or if your immune system is weakened. For our part, to reduce these risks, we will ensure aseptic conditions during your surgery and your stay in the hospital, and we will administer antibiotics.

For your part, to prevent infection:

- ☐ **Consult a professional if you suspect or notice one or more of these signs of infection:**
 - **Fever ≥ 38.5 °C (101.3 °F).**
 - **Redness or swelling of the wound.**
 - **Leakage from the wound.**
 - **Increased pain from the wound during activities or rest.**
- ☐ Get into shape by maintaining a healthy diet after your surgery.
- ☐ Maintain good oral health.
- ☐ Stop smoking or smoke as little as possible.
- ☐ You must not shave your leg for at least 3 weeks after surgery.
- ☐ Avoid people who have colds or infections.
- ☐ Follow instructions to look after the wound.
- ☐ Do not put your fingers in your mouth and wash your hands before you touch your dressing or the wound.

Hand Washing⁴⁵

On a daily basis, you touch a number of objects which could have been contaminated by viruses or bacteria left behind by yourself or by other people. When you touch your eyes, nose, mouth, or any wound with your contaminated fingers, you increase the risk of developing an infection. Therefore, you have to wash your hands very often to avoid developing an infection.

Everybody should wash their hands! Parents, children, adults, as well as staff in hospitals, schools, day-care centres, offices, restaurants, etc.

When to wash your hands:

- **Before and after changing a dressing;**
- When they are visibly dirty;
- After coughing or sneezing
- After blowing your nose or a child's nose;
- Before and after manipulating food, and before eating;
- After using the bathroom or after changing a diaper;
- Before putting on or taking off your contact lenses;
- After manipulating garbage.

Steps to follow to wash your hands properly:

- ❶ Remove your rings and wet your hands under warm running water.
- ❷ **Put a small amount (5 mL or 1 teaspoon) of liquid soap in the palm of one hand.** Bar soaps are not as hygienic as liquid soaps because they stay moist and attract germs. If you only have bar soap, it should be stored on a slatted drip rack so that it doesn't sit in water.
- ❸ Rub your hands together for 20 seconds to work up a lather. Make sure you scrub the backs of your hands, between your fingers, and under your fingernails.
- ❹ Rinse your hands thoroughly under clean running water for at least 10 seconds. Once your hands are clean, try not to handle the faucets. Use a paper towel to turn off the water.
- ❺ Dry your hands with a single-use paper towel. If you use a hand towel, be sure to change it every day. During cold and flu season, each family member should have his or her own hand towel.
- ❻ Use hand lotion to moisturize your skin if your hands are dry.



Hint: It is not necessary to use antibacterial soap.

⁴ <http://sante.gouv.qc.ca/conseils-et-prevention/lavage-des-mains/>

⁵ <http://healthycanadians.gc.ca/diseases-conditions-maladies-affections/disease-maladie/hygiene-eng.php>

Skin complications

Decubitus ulcers (commonly called bedsores) may result from the compression of skin covering bony parts or from moisture or friction. They occur in patients bedridden for an extended period of time or in a poor state of nutrition. It is possible to prevent this complication by using good skin care techniques, an appropriate mattress cover or a special mattress.

Allergic reactions are also possible, from a simple rash to a more intense reaction. To prevent this complication, you can:

- ☐ Check whether you have one or more allergies.
 - ☐ Move regularly and as soon as possible after your surgery.
- Proteins are essential to the healing and scarring of your surgical wound. To meet your protein requirements, make sure to eat 2 to 3 portions of protein every day. If you are unable to do so, purchase the appropriate supplements at your local pharmacy or grocery store.

Examples of protein rich foods	
Milk or fortified soy beverage: 250 mL (1 cup)	Legumes: 175 mL (¾ cup)
Yogurt: 175 g (¾ cup)	Tofu: 150 g or 175 g (¾ cup)
Cheese: 50 g (1½ oz.)	Eggs: 2
Meat, poultry, fish and seafood: 75 g (2½ oz.)	Peanut butter: 30 mL (2 tbsp)

Pulmonary Complications

After the surgery, as a result of the anesthesia and prolonged lack of movement, pulmonary complications, such as pulmonary edema or pneumonia, may occur. To avoid these complications, the care team will help you to get up on your feet on the day of your surgery or, at the latest, on the next day. Your role is as follows:

- ☐ Stop smoking or limit your consumption.
- ☐ Do your respiratory and circulatory exercises as indicated.
- ☐ Change positions every two hours (vary your posture even when you are in bed: on your back, on your side) and move as much as possible.
- ☐ **While in the hospital, if you have trouble breathing, notify your nurse. At home, you can call the Info-Santé nurse by dialling 811.**
- ☐ If you take medication to improve your breathing, take it after your surgery, as prescribed by your physician.

Cardiovascular Complications

The two most common postoperative cardiac complications, **although very rare**, are heart attacks and heart failure. The stress of surgery can cause a heart attack in individuals with heart disease (known or unknown).

Nerve Damage

Depending on the area of the surgical wound, some nerve damage (local loss of sensation in the skin, weakness...) may occur because of the proximity of nerves and blood vessels. Normally, such damage is temporary, especially if nerves were stretched by the spreaders used to facilitate the surgeon's movements. Sometimes, it can also be caused by epidural anesthesia. Permanent damage is a rare occurrence.

Loss of Appetite

- ☐ To stimulate your appetite, try to get some fresh air before meals, if possible.
- ☐ Have liquids a half-hour before or after meals, in order to avoid feeling bloated.
- ☐ Make food presentation attractive. Vary colours, flavours and textures; make meal time as pleasant as possible.
- ☐ It is often preferable to have 3 small meals and to add 3 snacks.
- ☐ Select ready-to-eat or easy-to-prepare dishes. Cook when you are feeling well and freeze the food as individual meals.

Dislocation or luxation (only if you have had a hip replacement)

Following a hip replacement, there is a risk of luxation/dislocation of the prosthesis. This can occur when the femoral head comes out of its seating in the socket. The prosthesis dislocates more easily than the natural hip because the surfaces in contact are generally smaller and they have no feeling. Moreover, the muscles and ligaments surrounding the hip have been separated or severed during surgery to access the hip joint, and although they were repaired after the prosthesis was installed, they are less effective for ensuring joint stability. This is especially true during the first month following the operation, the time it takes for the muscles and ligaments to repair themselves and heal.

Generally, to avoid luxation, you may have to avoid some hip movements, as prescribed by your orthopedist. Should you suffer a luxation, you will quickly see an orthopedist, who will discuss your options with you.

A word on polypharmacy

The hospitalisation rate resulting from the adverse effect of a medication is four times higher among older patients than among young adults.⁶ Moreover, polypharmacy is a known risk factor for falls among the elderly. This risk increases by 60% when over four drugs are taken.⁷ Thus, it is possible that the cause of the symptoms placing you at risk of falls is the combination or sum of the effects of the medications you are taking. The care unit pharmacist or physician unit might thus review and update the medications prescribed to you. After your hospital stay, you should talk to your family physician about this.

⁶ Rochon P.A. "Drug prescribing for older adults". www.utdol.com (Website consulted on February 20th, 2016).

⁷ Zieler G., Dieleman J.P., Hofman A. *et al.* "Polypharmacy and falls in the middle age and elderly population". *British Journal of Clinical Pharmacology*. 2005; 61 (2): 218-23.

STARTING THE ASSESSMENT OF YOUR FRACTURE OR FALL RISK FACTORS AND A TREATMENT PLAN FOR KNOWN CAUSES

The medical team (physician, pharmacist) will start assessing the causes that led to your hip fracture. Blood or other tests will be performed and we will start a treatment plan to reduce the factors that place you at risk for another fracture or a fall.

We will conduct follow-up with your family physician to inform your physician of this treatment plan. If you do not have a family physician and your risk factor is bone-related (osteoporosis), the Orthopaedic Clinic will provide follow-up for your condition.

PREPARING FOR YOUR RETURN HOME

Duration of hospital stay:	2 to 10 days
Duration of convalescence:	approximately 3 months
Time off work:	to be discussed with your orthopaedic surgeon
Driving:	not permitted for 8 weeks or more , as recommended by your physician

Before leaving the hospital:

- The dressing will be changed by the nurse or yourself. We will give you instructions to look after your surgical wound.
- Your physiotherapist will give you instructions regarding your exercises and the next steps of your rehabilitation.
- You will be informed of any restrictions that may apply.
- We will ensure that you know how to properly use the functional equipment you will need.
- You will receive a prescription for all the medications you will need: anticoagulant, analgesics, anti-inflammatories.
- We will give you, if possible, your next appointments with the orthopedic surgeon.
- The care team will make arrangements for follow-up by the CLSC (physiotherapy and wound care).
- Within the first day of your hospital stay, we will review with you the arrangements for your discharge from the hospital, the identity of your coach and who will be responsible for taking you home.

Medical Criteria for Hospital Discharge

We will regularly evaluate whether you have met the criteria required to allow your safe return home or discharge from hospital. We will be able to consider your discharge from the hospital as soon as:

- Your physical, cognitive and psychosocial condition is stable. More specifically, when:
 - The functioning of your physiological systems (cardiac, respiratory, digestive, etc.) has returned to the preoperative level.
 - You are alert and oriented on all levels.
 - You eat well, and experience no nausea or vomiting.
 - Your stool is normal and you have no urinary problems.
 - Your pain is properly controlled.
 - Laboratory results are stable.

- Your surgical wound shows no sign of infection.
- No major complications or reactions to treatment are anticipated.
- You and your network of caregivers agree that treatments can continue at home and you can participate in the CLSC's intervention plan.
- Your accompaniment and transportation are organized.
- You and your loved ones understand the treatment and monitoring to be performed, and you are able to identify problems related to:
 - Your medications
 - Self-management of your postoperative pain
 - Your surgical wound
 - Your exercises
 - Resuming your activities
 - Signs and symptoms of complications
 - Preventing falls

Rehabilitation Criteria for Hospital Discharge

If your medical condition is stable and complications, if any, are controlled or treated, the following additional criteria are used to make this decision.

- You are self-sufficient in performing your sit-to-stand and stand-to-sit transfers (chair/toilet) using the equipment, as required.
- You can get in and out of bed, without bedrails, either by yourself or with the assistance of your caregivers or using technical aids.
- You can dress your lower body either by yourself or with the assistance of your caregivers or using technical aids.
- You can walk safely with a walker over a distance of 15 m (50 feet) or as much as needed at your place.
- You can use stairs by yourself, taking into account the conditions present at your home (number of steps, handrails, caregivers...).
- Your cognitive state is similar to your pre-hospitalisation condition or sufficiently functional for your return home.

Visiting Policy

- Visiting hours are 8:00 AM to 8:00 PM 7 days a week. However, the presence of your coach is permitted at all times.
- The number of visitors or attendants allowed to visit a hospitalised person is limited to two at a time. Certain specific conditions may apply (intensive care...).
- Please note that children under 12 are allowed to visit hospitalized persons but they must be supervised by an adult at all times
- Visitors have access to parking. Parking fees are based on an hourly rate, with a maximum rate per day. You can also purchase a weekly or monthly parking permit.

Discharge Policy

- Make sure someone will be available to take you home as soon as the second day after your surgery (1 to 10 days). Once you have met the criteria for a safe discharge, you will be asked to return home. **You must leave your room 2 H after the announcement of your discharge.**

THE POST-HOSPITAL PHASE

PHASE	ACTORS	ACTIVITIES
POST-HOSPITAL	You and your coach	Performing all required care and exercises. Fostering optimal recovery of your function. Ensuring prevention and monitoring of complications. Maintaining constant communication with the care and medical teams. Preventing fracture or fall risk factors.
	Home Support	Ensuring support and follow-up of your physical condition, as required. Continuing your rehabilitation
	Outpatient Physiotherapy	Continuing your rehabilitation, if required.
	Orthopaedic surgeon	Providing follow-up of your surgery.

YOUR INVOLVEMENT AND YOUR COACH'S INVOLVEMENT

As far as you are concerned, this phase has five main objectives:

1. Performing all required care and exercises.
2. Fostering optimal recovery of your function.
3. Ensuring prevention and monitoring of complications.
4. Maintaining constant communication with the care and medical teams.
5. Preventing fracture or fall risk factors.

When you return home:

- ☐ Make sure you can call on your coach or get help from your family or friends for daily housekeeping activities.
- ☐ Continue your anticoagulant treatment, as well as your circulatory exercises until the date indicated in your program booklet.
- ☐ Remember: all sedatives can cause constipation; be active, adopt a high fibre diet, add prune juice, and drink 8 to 10 glasses (1.5 to 2 L) of water every day, unless you are subject to fluid restriction or on a special diet. As a last resort, you can insert a glycerin suppository.
- ☐ Use caution, since sedatives can produce nausea; if this happens, take your analgesics with food. If the situation persists, talk to your pharmacist or your physician, who may suggest supplemental medication for your stomach.
- ☐ Avoid consuming alcohol if you are taking analgesics.
- ☐ If your analgesic medication causes drowsiness, try taking smaller doses.
- ☐ Continue taking prescribed medication and following instructions, to reduce your pain, conserve your energy and ensure proper positioning. If your pain is still not under control, contact the Orthopaedic Clinic nurse.
- ☐ You may experience some difficulty concentrating if you have had general anesthesia.

This condition will improve over time. Follow the instructions you were given concerning driving and do not make important decisions, such as signing legal contracts, until your mental abilities return to their normal level.

- ☐ You can take a shower 2 days after the clips/sutures have been removed and when leakage from the wound has stopped. Do not take a bath. Carefully pat dry the wound area, **without rubbing**. Wait at least 3 weeks before taking a bath. **If there is leakage from the wound, taking a shower or a bath is not permitted.**
- ☐ Monitor and treat your surgical wound as per the instructions you received at the hospital.
- ☐ You must not shave your leg for at least 3 weeks after surgery.
- ☐ Don't drive until your surgeon authorizes you to do so.
- ☐ For health advice, you can reach Info-santé staff **at any time** by dialling **811**.

Advice on recovery and self-management of your pain⁸

- ☐ Feeling some pain after surgery is normal. Everyone is different, so learn to know and respect your limits by adapting your activities to your level of pain. Continue to take your analgesics, as required. The pain will gradually subside.
- ☐ Be active; gradually increase your level of activity, as suggested by the care team, by alternating periods of activity and periods of rest.
- ☐ Rest when you feel the need, but do not stay in bed after you have returned home. Try to change positions every 45 minutes, in order to avoid discomfort caused by stiffness; the best thing to do is to walk, at least over short distances.
- ☐ If your leg tends to swell, lie down for about 15 minutes several times a day, with your leg above the level of your heart. You could take this opportunity to apply **ice**, as required. You could also raise your leg, with a pillow under the calf, at a 15° angle; be careful not to bend the knee.
- ☐ **Do the exercise program given to you, at least twice a day** (ideally three or four times), in order to increase your endurance and ensure the return of complete mobility (see the Exercise section).
- ☐ Use home assistive devices or functional aids in order to protect the wound area and reduce the stress to which it could be submitted.
- ☐ Use your walking aid (cane, walker...) during the period required to develop a normal walking pattern. **Remember that it is better to walk normally with a cane than to walk with a limp without a cane.**
- ☐ Use chairs with arm rests, so that you can get up more easily.
- ☐ Follow the dietitian's instructions to resume eating normally, unless otherwise recommended. Eat plenty of foods containing proteins, fibres and vitamins in order to accelerate healing.
- ☐ Follow the instructions received when you leave the hospital concerning taking a shower, sexual activity, returning to work and driving.

⁸ Planning for Maximal Results: Preparing for Your Surgery. Canadian Orthopaedic Foundation. www.canorth.org

HOME SUPPORT SERVICES OR THE CLSC

Their interventions have two main objectives:

1. Ensuring support and follow-up of your physical condition, as required.
2. Continuing your rehabilitation as required or as appropriate for your condition.

Within 24 to 48 hours from your return home, a CLSC nurse will contact you to verify certain details (wound,...). Do not hesitate to contact your CLSC before this time should you have questions. **If no one contacts you, you must phone your CLSC to ensure follow-up is provided.** Depending on your condition a nurse may visit you, or you may have to go to the CLSC for follow-up on your physical condition and to receive the appropriate care (changing dressings...). If you have sutures or clips, they will be removed approximately 10 to 14 days after the surgery by the CLSC nurse. After the CLSC nurse's follow-up, if you notice drainage (leakage) from your wound, notify the CLSC nurse so she can check your wound. ***If there is leakage from your wound, taking a shower or a bath is not permitted.***

OUTPATIENT PHYSIOTHERAPY SERVICES

A member of the rehabilitation team will come to your home to continue with your rehabilitation, assess the safety of your home and make recommendations to you on the layout of your home based on your recovery. This team will act as a guide; active follow-up will not be performed at your home. If the team does not contact you, you must phone your CLSC to ensure that follow-up is provided. Normally, follow-up is conducted over a period of approximately 3 months, with an average of 5 to 7 visits. The frequency of home visits is greater during the first few weeks. If your condition requires a more regular follow-up or more intensive guidance and supervision, a consultation request will be sent to an external care provider (day hospital, outpatient services).

For younger patients with a long-standing limp, outpatient physiotherapy is advisable, in order to adjust the exercise program according to the problems and the progress during monthly follow-up visits until strength is restored in the abductor, rotator and extensor hip muscles (this could take up to 1 year). Your orthopaedic surgeon will tell you whether this applies to you. Arrange transportation for your treatments, because you will not be able to drive for 8 weeks or more.

Improving your functional level beyond these objectives is your responsibility, as it is for the general public. We encourage you to join a fitness centre, go to a swimming pool, take lessons (dancing, tai chi, yoga...) or consult a physiotherapist in a private clinic.

RETURNING TO WORK

Most patients are unable to return to work for at least 8 weeks following their surgery. However, if you do sedentary work and your state of health permits, you could resume your professional activities sooner.

- ☐ Discuss the matter with your surgeon at your first follow-up visit.
- ☐ Even if you return to work, make sure to continue with your exercises.
- ☐ Depending on the type of work you do, discuss your special needs with your employer: frequent changes of position, elevating your leg, time to do your exercises.

RESUMING ACTIVITIES⁹¹⁰

TO BE DISCUSSED WITH YOUR ORTHOPAEDIC SURGEON

Activities to resume immediately:

- ☐ As soon as you return home, walking should be your preferred activity.
- ☐ When your wound is completely healed (3 weeks), going to the pool, provided the pool is equipped with stairs and handrails. Make sure to give your pain proper consideration.

Activities to resume after 6 to 8 weeks (unless otherwise specified by your orthopaedic surgeon):

- ☐ Stationary bicycle (can be used earlier as a mobility exercise).
- ☐ Swimming in any pool.
- ☐ Social dancing.
- ☐ Driving a car, provided you meet SAAQ requirements (after 8 weeks or more).
- ☐ Discuss with your surgeon any other leisure or sports activities of interest to you.

Activities to resume after 3 months (unless otherwise specified by your orthopaedic surgeon): Watch out for any risks of falls.

- ☐ Lifting moderately heavy loads
- ☐ Gardening: sitting on a small bench
- ☐ Lawn care and mowing
- ☐ Golf
- ☐ Bowling, petanque (lawn bowling)
- ☐ Bicycling outdoors (not mountain biking)
- ☐ Doubles tennis (occasionally)
- ☐ Classic cross-country skiing
- ☐ Snowshoeing

⁹ A Guide for Patients Having Hip or Knee Replacement, Holland Orthopaedic & Arthritic Centre, Sunnybrook, Toronto.

¹⁰ Kuster M.S. Exercise Recommendations after Total Joint Replacement, Sports Medecine, 2002: 32 (7) 433-445.

Activities to discuss with your orthopaedic surgeon:

- ☐ Mountain biking
- ☐ Downhill skiing or cross-country skiing (no skating)
- ☐ Sailing
- ☐ Canoeing
- ☐ Trekking
- ☐ Horseback riding
- ☐ Skating
- ☐ Team sports (hockey, soccer...)

High-risk activities (not recommended):

- ☐ Singles tennis
- ☐ Running, jogging
- ☐ Squash, racquetball
- ☐ High-impact aerobics

VISIT TO THE ORTHOPAEDIC SURGEON

The main objective of the first postoperative visit to the orthopaedic surgeon is to ensure follow-up of your surgery. Therefore, you will have a follow-up appointment 6 to 8 weeks after your surgery. If you have not been given your appointment time when you are discharged from the hospital, you will be contacted during the next few weeks to make that appointment. **If no one contacts you, you must phone the Orthopaedic Clinic to ensure that the follow-up is provided.** During that visit, the Orthopaedic Clinic team will make sure that your condition has progressed normally. You may have to undergo certain radiological or clinical tests in order to measure your progress.

If you have a prosthesis, you will have regular visits with your orthopaedic surgeon in order to verify the proper positioning of your prosthesis and to check for any signs of late complications, such as infection, loosening of the implant or rejection. These complications are rare and sometimes impossible to detect, because they remain symptomless, so it is necessary to ensure monitoring.

- ☐ Write down your questions.
- ☐ Inform the orthopaedic surgeon of any complications which might have occurred and been treated by another physician.
- ☐ Make sure you understand the instructions: precautions, restrictions concerning certain activities or sports.
- ☐ Ask the surgeon for the date of your next scheduled visit.
- ☐ Check whether you can resume driving an automobile.
- ☐ Discuss your return to work with the orthopaedic surgeon.
- ☐ Make sure you get all the necessary information about the antibiotics you may have to take before a dental treatment or before certain surgical operations (where applicable).

THINGS TO WATCH FOR

NOTIFY THE ORTHOPAEDIC CLINIC AT 819 966-6022 OR 819 966-6200 EXT. 3967 OR INFO-SANTÉ AT 811, IF:

Signs of wound infection:

- ☐ The area around the wound becomes increasingly red, warm and very swollen.
- ☐ There is a separation of the incision edges.
- ☐ There is leakage of fluid at the hip surgical site (green, yellow, or pus).
- ☐ There is a bad odour from your wound.
- ☐ You have a fever ($> 38.5^{\circ}\text{C}$ or $>101.3^{\circ}\text{F}$, measured 30 minutes after eating or drinking) for more than 24 hours.

Signs of bleeding:

- ☐ Red or dark urine.
- ☐ Red or dark stool.
- ☐ Bleeding from the gums or nose.
- ☐ Excessive bruising.

VISIT THE EMERGENCY DEPARTMENT IF:

Signs of thrombophlebitis:

- ☐ You have persistent pain in your legs (calves) or arms, increasing with activity or when touching the calf or biceps, with or without swelling.

Signs of pulmonary embolism:

- ☐ You have chest pain.
- ☐ You experience difficulty breathing, wheezing or shortness of breath even at rest.
- ☐ You experience unexplained sweating.
- ☐ You become confused.
- ☐ You feel a sharp pain in the shoulder when you take a deep breath.

SPECIAL RECOMMENDATIONS

- While you are using anticoagulants, prevent cuts and injuries by:
 - Shaving carefully, ideally with an electric razor;
 - Using a soft toothbrush;
 - Clipping your nails carefully;
 - Wearing shoes at all times;
 - Following fall prevention instructions.
- If you have to undergo dental or any other surgery, you must notify your dentist or physician that you have a hip implant. You may have to take antibiotics before any dental treatment.

Notify your family physician if you develop any type of infection: urinary, dental, throat... An antibiotic may be necessary.

LIVING AFTER A HIP FRACTURE AND PREVENTING OTHER FRACTURES

PHASE	ACTORS	ACTIVITIES
LIVING AFTER A HIP FRACTURE AND PREVENTING OTHER FRACTURES	Family doctor	Regularly assessing your fracture or fall risk factors, polypharmacy, your chronic illnesses.
	You and your coach	Following the advice provided. Continuing the exercise program and adopting a healthy lifestyle. Optimizing your health and your physical condition.

VISIT TO YOUR FAMILY DOCTOR

Discuss the following with your family physician (if you have one):

- ☐ Follow-up suggested by the orthopaedic surgeon;
- ☐ Assessment of your fracture or fall risk factors;
- ☐ Your list of medications and management of side effects;
- ☐ Stabilisation of your chronic illnesses.

YOUR INVOLVEMENT AND YOUR COACH'S INVOLVEMENT

WHAT TO EXPECT¹¹

It is not uncommon to continue feeling pain around the surgical wound. It may take a few months to obtain the desired results, so do not get discouraged.

- ☐ Continue following the advice provided.
- ☐ If you have questions, at any time, don't hesitate to contact the Orthopaedic Clinic nurse.

You will experience progressive improvement up to 5 or 6 months after the surgery. Afterwards, improvement will be slower. It has been demonstrated that even after a year or more, activity can increase as muscular strength continues to improve.

THE RISKS INVOLVED IN HAVING A PROSTHESIS

Prosthetic infections may occur as a result of the improper treatment of the site of infection: whitlow or felon (tip of the finger or nail infection), ingrown nail, infection of the ear/nose/throat sphere (sinusitis, laryngitis, etc.), bronchitis, urinary infection. Do not wait to consult your family physician in case of infection, to have an examination and, possibly, a prescription for antibiotics.

- ☐ Make sure to notify your dentist and any other physician you may consult that you've had a hip replacement. Even in the course of a routine dental check-up, you may run the risk of developing an infection. A small infection can create a serious problem, and the health

¹¹ Planning for Maximal Results: Preparing for Your Surgery. Canadian Orthopaedic Foundation. www.canorth.org

professionals who treat you know what precautions to take. It's your job to keep them informed.¹²

POSTOPERATIVE CONTRAINDICATIONS

It is not advisable to:

- Put too much weight or impact forces on the affected joint by carrying heavy objects pressed against the operated leg or by jumping.
- Practise activities involving risks of injury such as contact sports.
- Pivot on the operated leg.

After the 6 weeks have passed, pain will be your best guide. Activities such as washing the floor or the bathtub, kneeling on the floor or kneeling in church that involve positions such as **kneeling, crouching or being on all fours** will be difficult.

If you have a **hip prosthesis**, depending on the surgical approach used by your surgeon, **certain more specific contraindications may apply**. Your therapist will inform you which contraindications apply to you. During your convalescence (6 weeks), avoid doing the following movements. These movements will be allowed progressively, starting 6 weeks after surgery.

☐ HIP FLEXION MORE THAN 90°:

- Do not bend forward at an angle of more than 90°, as this would risk dislocating the prosthesis from its articulation. **The angle of 90° corresponds in a seated position where your hands are resting on your thighs with your elbows straight (not bent).**
- While seated, do not raise your knee higher than the operated hip and avoid low, deep chairs.



☐ INTERNAL ROTATION AND ADDUCTION (DO NOT TURN YOUR KNEES INWARDS) COMBINED WITH HIP FLEXION:

- Your knees should never touch when your feet are apart (never turn your knees inwards). Always keep your leg aligned properly.
- Do not cross your legs. Do not rotate your trunk.



¹² Ibid

FREQUENTLY ASKED QUESTIONS

How long does it take to get a final result?

You will require several months to enjoy all the benefits of the operation. You must resume your activities in a smooth, progressive manner during the first 2 months following the surgery (range of movement, muscular effort, etc.). For all practical purposes, you will need approximately 5 to 8 months to obtain optimal results after a hip surgery.

Can I live normally after a hip fracture?

It is possible to live normally after a hip fracture within the usual conditions of daily activities. A piece of advice: consider your age and your physical abilities prior to surgery, in order to define realistic objectives.

Can I participate in sports?

Nothing is formally prohibited. It all depends on age, state of health, type of sport, physical abilities prior to the surgery. You must, however, exercise moderation in practice, as well as control your enthusiasm; a fractured hip is more fragile than a normal hip. You can ride a bicycle, practise non-aggressive skiing, swimming, etc., providing you were already doing these activities before the surgery. **Avoid** sports where the hip is subjected to excessive stress and contact sports (racing, jumping, judo, karate, team sports, etc.). **Recommended** alternatives: swimming (after 3 weeks), walking, golf, riding a bicycle, while taking into account your limitations and your pain.

Can I travel?

In most cases, there are no specific precautions involved in travelling, though it is recommended to **avoid long plane trips for the first 3 months**. While on board an airplane, don't forget to do your circulatory exercises (ankle pumping) at least every hour. It is essential to buy appropriate travel insurance, including medical evacuation in case of problems. When travelling to a faraway country where the health system is rudimentary, consult your family physician one month in advance to plan ahead. You should know that walk-through metal detectors in airports might detect the steel used to repair your hip. In such cases, you should be prepared to show your surgical incision (scar).

Should I follow a special diet?

Watch your weight: obesity is a hip implant's worst enemy. A varied, balanced diet, combined with regular physical activity, is always recommended.

TIPS FOR PREVENTING FRACTURES AND HEALTHY LIFESTYLE HABITS

Adopting a healthy lifestyle is essential to optimize your health and your physical condition. As such, the proposed actions (see Summary Table on page 38) will help reduce the risk of postoperative complications and new fractures or falls. Here are a few examples.

Eating

- ☐ Maintain or achieve your healthy weight. This will facilitate your exercises and protect your joints, so it will be easier for you to get moving and resume your activities of daily living.
- ☐ Healthy eating contributes to speedy recovery after surgery and helps prevent postoperative complications. Eat three balanced meals a day, and refer to Canada's Food Guide (CFG: www.hc-sc.gc.ca) or consult a dietitian. You can also add snacks, as required. After your surgery, it is important to give special attention to certain nutrients: proteins, iron, calcium, vitamin D, and dietary fibres.
- ☐ Calcium and vitamin D are important nutrients to maintain strong, healthy bones. Adults over 50 need to consume a 400 IU Vitamin D supplement.
- ☐ Drink plenty of water in order to achieve optimal hydration (1.5 to 2 L per day), unless you are subject to fluid restriction.
- ☐ The consumption of alcohol might impact your stay in the hospital. It is important to understand that alcohol:
 - i. reduces the capacity of your immune system;
 - ii. inhibits the healing of tissues (poor scarring);
 - iii. contributes to the development of certain complications, such as delirium, pneumonia, infections, etc.;
 - iv. complicates pain management.

Therefore, we recommend that you reduce to a minimum your consumption of alcohol after your surgery. Alcohol, anesthesia and analgesics can be a very bad combination. Reactions such as confusion, hallucinations, tremors, nausea and vomiting may occur.

Physical Activities¹³

Surgery is a stressful experience for the body. Therefore, one key to a successful operation is to be in good physical condition. Exercising can help you improve your endurance, muscular strength, posture, balance, and heart health. This could help speed up your recovery after the operation. Also, extensive research has demonstrated that physical activity: ¹⁴

- can help reduce pain;
- improves the serum lipid profile ¹⁵ (cholesterol level);
- can help reduce smoking;¹⁶
- contributes to substantially improving the quality of life (physical capacity, reduced symptoms, self-confidence and self-esteem, return to work, etc.) of people with heart ¹⁷ or lung¹⁸ problems;

¹³ Planning for Maximal Results: Preparing for Your Surgery. Canadian Orthopaedic Foundation. www.canorth.org

¹⁴ *Cadre de référence : Traité santé. Programme régional de réadaptation pour la personne atteinte de maladies chroniques*, Agence de la santé et des services sociaux de la Capitale-nationale, Région 03, February 2007, ISBN 978-2-89616-021-1 (PDF version).

¹⁵ H.R. Superko et P. Dunn. "Sophisticated Lipid Diagnosis and Management: The Potential for Plaque Stabilization and Regression in the Cardiac Rehabilitation Setting." in: F.J. Pashkow and W.A. Dafoe (eds.). *Clinical Cardiac Rehabilitation: A Cardiologist's Guide*, 2nd ed., Baltimore, Williams & Wilkins, 1999, p. 327-64.

¹⁶ M.C. Rosal, I.S. Ockene, et J.K. Ockene. "Smoking Cessation as a Critical Element of Cardiac Rehabilitation," in F.G. Pashow et W.A. Dafoe (Ed.). *Clinical Cardiac Rehabilitation: A Cardiologist's Guide*, 2e ed., Baltimore, Williams & Wilkins, 1999, p. 365-82.

¹⁷ N.K. Wenger, et al. «Cardiac Rehabilitation as secondary Prevention», in Agency for Health Care Policy and Research, and National Heart, Lung and Blood Institute. *Clinical Practice Guideline Quick Reference Guide for Clinicians*, 1995(17): 1-23

- increases energy expenditure, a complement to dietary changes with regards to weight control;¹⁹
- improves effort and endurance capacity;²⁰
- reduces blood pressure;
- fosters adherence to treatment;
- may reduce the need for hypoglycaemic medication in type 2 diabetics.²¹

As you can see, your rehabilitation continues for your entire life. Here is what we suggest.

- ☐ Do your mobility, strengthening and balance exercises (see the “Rehabilitation” section) every day, because they have a positive influence on your ability to recover your strength and muscle tone after the operation, as well as on your blood circulation, which reduces the risk of clots forming in your leg (thrombophlebitis).²²
- ☐ Exercise to tone upper body muscles, especially if you need to use a walker or crutches after surgery.
- ☐ Remain or become active, within your limits, and vary your activities. If you are not usually active, check with your family physician about the level of activity that is safe for you. Here are a few tips.
 - i. We suggest walking, swimming or stationary cycling (unless this significantly increases pain). Avoid activities causing too much stress on your joints: jogging, Stairmaster, jumping, squatting.
 - ii. It is important to start slowly. Your objective is to be active every day.
 - iii. Wear shock-absorbing shoes that support your arches.
 - iv. Start with a few minutes, and increase gradually to 20 or 30 minutes, 4 to 7 times a week. If you can't do 30 minutes non-stop, try to perform the activity for 10 minutes, 3 times a day.
 - v. To maintain a safe level of training, make sure that you keep talking without being short of breath while you perform the activity.
 - vi. Articular or muscular pain that lasts more than 2 hours after exercising or fatigue that lasts until the next day indicates that you have probably exercised too much or too hard!

¹⁸ Y. Lacasse, *et al.* «The Components of a Respiratory Rehabilitation Program: A systematic Overview», *Chest*, 1997; 111(4): 1077-88.

¹⁹ J. Desaulniers et D. Rioux. *Guide pratique du diabète de type 2, Édition du Québec*, Trois-Rivières, Formed, mai 2002, chapitre 22, p. 131-44

²⁰ NH. Miller, M. Hill, T. Kottke *et al.* “The Multilevel Compliance Challenge: Recommendations for a Call to Action. A Statement for Healthcare Professionals”. *Circulation*. 1997; 95:1085-1090.

²¹ G.F. Fletcher *et al.* “Statement on Exercise: Benefits and Recommendations for Physical Activity Programs for all Americans. A Statement for Health Professionals”, *Circulation*, 1996;94(4): 857-862.

²² Canadian Orthopaedic Foundation. www.canorth.org, heading: Continuum of Care

Tobacco and Your Health

Smoking delays bone healing and wound scarring. It is also a factor contributing to pulmonary complications and a factor predisposing to osteoarthritis. Remember that second-hand smoke is just as harmful to non-smokers. There are several resources available to help you quit smoking: your pharmacist, your family physician, smoking cessation centres, and certain websites, such as: <http://www.hc-sc.gc.ca/hc-ps/tobac-tabac/index-eng.php> (Health Canada), <http://www.pq.lung.ca/>, <http://www.defitabac.qc.ca/defi/en/index.html>, <http://www.jarrete.qc.ca/en/default.html>, http://www.cqts.qc.ca/candidature_Prix_Marcel-Boulanger_en.pdf, <http://www.cancer.ca>, or contact the Lung Helpline at 1 888 768-6669, extension 232.

Oral Health²³

Orthopaedic surgeons recommend treating dental and gum problems especially after an arthroplasty. It is also important to finish any dental procedures, as germs from your mouth could enter your bloodstream and infect your new joint.

Optimizing Control of Your Chronic Diseases

- ☐ Consult your family physician in order to optimize control of your chronic diseases, such as osteoporosis, high blood pressure, diabetes, pulmonary disease, and heart disease.
- ☐ If you experience dizziness, light-headedness, losses of balances, talk to your physician.
- ☐ If you notice changes in your memory, ability to reason or behaviour, talk to your physician.
- ☐ In order to avoid circulatory complications, we suggest not remaining seated for more than three hours at a time for the month after your surgery. Long trips are also not advisable.

Vaccination

According to the *Protocole d'immunisation du Québec*²⁴ (Quebec Immunization Protocol), individuals with chronic diseases are not more susceptible (i.e. they are not more likely to get) vaccine-preventable diseases, but should they contract one, do face a higher risk of morbidity (*complications*) and a higher mortality rate. Vaccination against influenza, pneumococcus, diphtheria, pertussis (whooping cough), and tetanus is recommended.

- ☐ Therefore, we suggest that you discuss updating your vaccination profile with your family physician or take part in vaccination campaigns organized by the *Ministère de la Santé*.

²³ Planning for Maximal Results: Preparing for Your Surgery. Canadian Orthopaedic Foundation. www.canorth.org

²⁴ Protocole d'immunisation du Québec, 2013. ISBN: ISSN 1925-069X. PDF document accessible from http://publications.msss.gouv.qc.ca/msss/fichiers/piq/piq_complet.pdf

Stress Management, Positive Thinking and Restful Sleep²⁵

Stress has a negative impact on your health, immune system, cardiorespiratory system and general state of mind. Therefore, it is essential to relax your body and your mind. The benefits of positive thinking will allow you to exercise more control over your emotions, slow down your breathing, ease your muscular tension and reduce your anxiety. Your attitude is important: optimists tend to look for solutions to their problems, while pessimists tend to dwell on their worries and fears.

- ☐ We recommend that you sleep as well as possible and to devote the necessary time and effort to successful recovery.
- ☐ Practise the following relaxation method regularly. Plan to have a daily 15-minute relaxation session, ideally, following your exercises. To help you with this exercise, you could use a online video, CD or DVD to guide you while you practise a relaxation technique.

Relaxation Technique

1. Place one hand on your abdomen.
2. Breathe in deeply while concentrating on a positive image. Use all of your senses (i.e. sight, hearing, touch, taste, and smell) to make your image even more realistic. For example, imagine you are on a cruise, the sky is blue, the water sparkles, and you hear the sound of the sea and smell the fresh air.
3. Feel your abdomen inflating. Push your abdomen out as much as possible while you breathe in; this will help you fill your lungs with air.
4. Breathe out through your mouth, while pursing your lips (as if to blow out a candle).
5. Feel your abdomen returning to its normal size. Start to relax.
6. After each exhalation, wait until you're ready to breathe in again. Continue this relaxation exercise while visualizing your positive image.
7. After a few breaths, you will follow your own rhythm. For example: one deep breath for every five normal breaths. If you start to feel dizzy, take a few normal breaths before starting over. Conclude this relaxation and visualization exercise while retaining your positive image.

Do you feel the calm within you? Savour this calm and peaceful feeling. Take a few minutes to enjoy this intense state of relaxation.

²⁵ Living Well with COPD, Patient Education Tools. www.livingwellwithcopd.com

SUMMARY TABLE: OPTIMIZING YOUR HEALTH

Ways of optimizing your health	Preventing or reducing potential complications
Healthy eating, according to the Canada's Food Guide, combined with proper hydration. Your family physician may prescribe iron supplements and/or vitamins: check with your physician.	<ul style="list-style-type: none"> Fosters better postoperative recovery Prevents anemia Improves wound healing Prevents bedsores Improves physical condition Reduces fatigue Controls glycemia
Reaching your healthy weight	<ul style="list-style-type: none"> Facilitates postoperative exercise Facilitates mobilization Allows faster resumption of daily living activities Optimizes the service life of your implant Prevents phlebitis Prevents infection
Reducing the consumption of alcohol	<ul style="list-style-type: none"> Boosts your immune system Reduces the risk of delirium, hallucinations, pneumonia, and infection Facilitates control of postoperative pain Fosters better overall healing
Physical activities	<ul style="list-style-type: none"> Increases endurance Increases muscular strength Facilitates mobilization after surgery Reduces the risk of phlebitis Reduces the risk of falls
Stress and rest management	<ul style="list-style-type: none"> Optimizes the ability to relax Fosters better sleep after surgery Fosters better pain control
Smoking cessation	<ul style="list-style-type: none"> Fosters better bone healing Fosters healing of the surgical site Optimizes pulmonary capacity Reduces the risk of infection
Oral health	<ul style="list-style-type: none"> Reduces the risk of infection
Chronic disease control: diabetes, high blood pressure, heart disease, circulatory disease	<ul style="list-style-type: none"> Fosters healing of the surgical site Facilitates mobilization after surgery Reduces the risk of postoperative infarction Reduces the risk of phlebitis and pulmonary edema
Regular intake of analgesics	<ul style="list-style-type: none"> Allows optimal pain control to speed up recovery Improves medication effectiveness Helps to maintain the pain level at 3/10 or less as early as day 2 after surgery

YOUR REHABILITATION

Your Rehabilitation through the Continuum

Your rehabilitation starts at the hospital and continues progressively until your maximum recovery (up to a year). During your stay in the hospital, starting on the day of your surgery, we will be focusing on the recovery of: your functional abilities, your mobility, your strength, your endurance, your posture, your reflexes and your balance. Every day, you will meet a member of the rehabilitation team (physiotherapist, physical rehabilitation therapist, occupational therapist). The nursing and auxiliary staff will also be very present to help you regain your mobility as soon as possible. We are here to help or assist you, but you must gradually learn to perform your exercises, movements, dressing and transfers by yourself (or with the help of your coach), because you will have to continue doing these things after you return home.

The objectives of rehabilitation during the hospitalisation phase are:

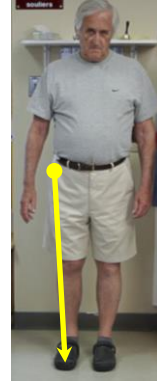
- Reducing pain and swelling;
- Ensuring your safety in your daily activities;
- Encouraging you to move, do your exercises and walk;
- Preparing you to safely take charge of your rehabilitation and your return home;
- Improving your functional level, increasing your independence;
- Reducing the risk of falls;

Here is an overview of what might be done during your stay (**example of a 5-day stay**).

- **Day 1 and 2:**
 - ▶ We will help you do your exercise program, while controlling your pain.
 - ▶ We will help you get up and, possibly, walk several times a day until you are able to do so safely by yourself.
 - ▶ You will move about with a walker (yours or one supplied by the hospital). You will be able to gradually put weight on your leg, depending on your surgeon's instructions.
- **Day 3 and 4:**
 - ▶ Everything will be in place to encourage you to be increasingly self-sufficient in your movements (to the bathroom, to your chair, in the corridor), your personal care and getting dressed.
 - ▶ You will continue your exercises (see the section on exercises).
 - ▶ You will go to the Rehabilitation Department to practise various elements to prepare for your return home: stairs, walking, transfer to the bathtub.
 - ▶ We will finalize the preparations for your return home.
- **Day 5:**
 - ▶ You will continue your exercises (see the section on exercises).
 - ▶ You will be discharged from the hospital. **You should leave your room by 11:00 a.m.**

EXERCISES: in the hospital and when you return home

- Doing your exercises every day will allow you to accelerate your healing and maximize its benefits. The exercises are primarily designed to help you recover your strength and your mobility, and to prevent certain complications of a circulatory, respiratory or intestinal nature. They also prevent stiffening of your hip. In general, they will help you optimize your physical condition.
- Following your discharge from the hospital, you may get a few visits at home from the CLSC physiotherapist, in order to continue with your rehabilitation. Discuss this with your physiotherapist at the hospital.
- You must always maintain a **perfect alignment** of your leg: foot, knee, and hip well aligned, without torsion. It is important to maintain this alignment when you do your exercises, sit, get up, walk, climb stairs, lie in bed, or remain seated.



☐ **RESPIRATORY EXERCISES:** Repeat these 10 times every hour

Goals: To help prevent respiratory complications and facilitate relaxation.

Either sitting or lying down (on your back or on your side), place one hand on your abdomen.

- Without a spirometer:** Take a deep breath through your nose, ideally by expanding your abdomen in a natural way without effort, hold it for 3 seconds, then exhale smoothly through your mouth, pursing your lips as if to blow out a candle.
- With a spirometer (if available):** Insert the mouthpiece of the spirometer in your mouth, and breathe as you would without the spirometer. Maintain the ball elevated for 3 seconds while you breathe in.
- After your respiratory exercises, cough a few times and spit out, if necessary.

☐ **CIRCULATORY EXERCISES:**

Goals: To help prevent circulatory complications and facilitate proper blood circulation.

- Lying down, pull your feet up toward your knees as much as you can so as to feel stretching in your calves. Point your feet downward as far as you can so, as to feel your calves hardening. **Repeat this 30 times in a minute or so, every hour.**²⁶



- Lying on your back, one or both legs stretched out, push your knees down into the mattress and pull your toes towards you while hardening your thighs and buttocks. **Repeat this 10 times every hour.**



²⁶ McNally, M.A. & al, 1997. *The Effects of Active Movement of the Foot on Venous Blood Flow after Total Hip Arthroplasty*. JBJS, 79-A:8, pp. 1198-1201.

MOBILITY, STRENGTHENING AND BALANCE EXERCISES²⁷

(Only do the exercises that are indicated by the rehabilitation team.)

Goals: To help recover a proper range of movement, improve your strength, prevent circulatory complications and facilitate proper blood circulation.

For all exercises to be done lying down, make sure the bed headboard is flat (not in a semi-raised position). **You must repeat only the exercises indicated 10 times, three times a day.** Slowly increase the number of repetitions as your tolerance increases. Each exercise must be done slowly, without inhibiting your breathing. It is normal to feel **moderate** pain for 10 to 30 minutes after the exercises.

- ❑ **Knee flexion** : lying on your back, bend the knee of your operated leg as much as you can by sliding (lightly, without friction) the heel on the mattress, without lifting your foot from the bed. Do the same with the other leg in order to activate your blood circulation.



- ❑ **Hip abduction** : lying on your back, by firmly contracting your thigh (quadriceps muscle) and pulling your foot up towards your knee, spread your operated leg outward as far as you can; then, bring it back towards the centre by sliding it on the bed (without moving your pelvis and crossing the midline). You can put a plastic bag under your foot to make it slide more easily.



- ❑ **Psoas stretching (operated leg only)** : lying on your back, **bend the knee of your non-operated leg** as much as you can, while sliding and keeping the operated leg stretched back and in contact with the bed. This should stretch the muscle at the front of your operated hip.



- ❑ **Knee extension on a roll** : lying on your back, bend your non-operated leg and place a rolled-up towel under the knee of the operated leg. Lift the heel as high as you can. Do not lift your knee off the roll. (Do not leave the roll in place after your exercise.)



- ❑ **"Bridge"**: bend both knees and push down on the mattress to raise your buttocks off the bed (use your buttock muscle). **Do not do this exercise until you are permitted to put weight on your operated leg.**



- ❑ **Knee extension sitting** : contracting your thigh muscles, stretch your leg straight as far as you can without lifting your thigh off the chair. If this strains your back, lean back slightly (half-sitting position).



²⁷ Fleury France Charles (March 2009). *Recueil des meilleures pratiques concernant l'organisation des services et les interventions en réadaptation pour les personnes ayant reçu une prothèse totale de hanche et de genou*. Agence de la santé et des services sociaux de la Montérégie, p. 27

- ☐ **Chair Push-up :** Sitting on a chair with armrests, push up to raise yourself until your elbows are straight. Stay there a few moments, then lower yourself slowly, controlling your descent.



Standing up, hands on a counter, the back of a chair or a table:

- ☐ **Knee flexion standing:** bend the knee of your operated leg as much as you can without bending your back or hip.



- ☐ **Hip flexion standing :** bend the knee of your operated leg while you bend your hip, without bending your back.



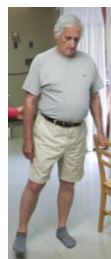
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- ☐ **Mini-squat and knee extension:** keep your back straight, your feet spread shoulder width apart and your weight on your heels. While aligning your patellae (kneecaps) to your second toes and pushing your buttock slightly backward, bend your knees until you feel your thighs working (A), and hold this position for ____ seconds. Then, straighten your knees as much as possible, and hold this position for ____ seconds. Repeat ____ times.

B



- ☐ **Hip movements standing :** with your knee straight and without moving your back, move your operated leg: Forward To the side Backward



ICE OR HEAT²⁸²⁹

- During the acute phase and the rehabilitation phase, applications of ice are recommended. However, you can continue them longer if you find them beneficial.

precautions or contraindications concerning ice and heat

- Never apply **ice** or **heat** in the following cases: severe circulatory problems; significant decrease in sensitivity; under medication affecting awareness; malignant tumour (cancer); during sleep.
- Never apply **ice** in the following cases: anemia, Raynaud's disease, large open wound, intense discomfort due to cold, cold urticaria, severe hypertension, diabetes with circulatory complications.
- Never apply **heat** in the following cases: haemorrhage, acute stage of inflammation, infection, open wound, access, skin disease (eczema), and heat allergy.
- To check whether you have an allergic reaction to cold or heat, apply each to an area other than the site of pain for a period of 3 minutes. If the skin turns red, it's a normal reaction. If the redness is accompanied by swelling, the use of ice or heat is not recommended.

Ice

- Wrap some ice, preferably crushed, or a bag of small frozen vegetables (peas) in a towel or plastic bag and apply on the area to be treated for 20 minutes, without getting your surgical wound wet. Afterwards, the treated area should be "red". Check your skin for any signs of burning, and stop using ice if any such signs should appear.
- Ice can be applied several times a day. Wait at least 2 to 3 hours between applications.
- You could also use gel-filled cushions or thermal wraps which, by chemical reaction, become very cold when covered with a damp towel.

Heat

- Before using heat, you must make sure that the wound is completely closed and healed and that you've recovered your sense of touch in the skin around the scar (**at least 3 weeks after surgery**).
- Use one of the following methods: Magic Bag, gel-filled cushion, thermal wrap, electric pad. Apply on the area to be treated for 20 minutes.
- Wait at least 2 to 3 hours between applications of heat.
- Make sure you don't fall asleep with a thermal wrap or an electric pad on your skin.

²⁸ Ordre de la physiothérapie du Québec, Vous avez de la douleur, glace ou chaleur? 2008 (in French only).

²⁹ Brosseau L., Yonge K., Welch V., Marchand S., Judd M., Wells G.A., Tugwell P., *Thermotherapy for Treatment of Osteoarthritis (Review)*. Cochrane Collaboration. 2003

MASSAGING THE SCAR³⁰

- Initially, the incision (the cut) is slightly warm, red, sensitive, or uneven.
- It is normal to feel itching or numbness.
- Once healed, your scar should become mobile and flexible again to allow complete movements of the articulation.
- As soon as the sutures have been removed and **the scar is exempt of any crust (scabs) or leakage** (around the 3rd week), you can begin massaging the tissues around the surgical site (but not if you've had a skin graft).

"Massaging" the scar has several important purposes:

- Modelling the scar (keeping it flat).
- Favouring an adequate production of collagen.
- Helping to reduce itching and pain.
- Giving the scar added flexibility.

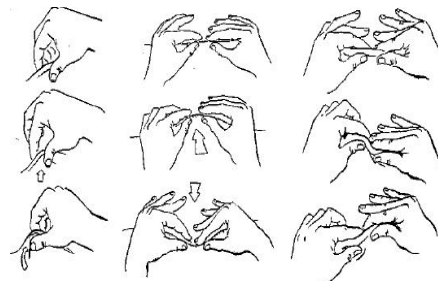


To perform the massage, you can use, **as per your physician's instructions**, a small amount of unscented emollient cream or vitamin E. oil. Place the pads of your index fingers on each side of the scar, press firmly but not painfully on the tissues so that your fingers and your skin move together: your fingers must not slide on your skin or on the scar. To stretch your scar and the surrounding tissues in every direction, do each of the following movements 10 times, twice a day. Move your fingers and your skin:

- Vertically, up and down.
- Horizontally, right and left.
- In small circles in one direction and the other.

Then, place the pads of your index fingers and thumbs on each side of the scar, press firmly but not painfully on the tissues so that your fingers and your skin move together:

- Gently pinch the skin so as to create a fold; this will lift the skin slightly to separate it from the bone or the muscle.
- Try to roll this fold upward, then downward (towards the extremities of the scar).



On the first days when you perform these massages, it is normal for the scar to react somewhat, by swelling a bit or by becoming warmer. If this creates discomfort, you can apply ice for 20 minutes on your scar after the massage sessions.

Continue with these massages for as long as it takes for the scar to become as flexible as the normal tissues around it. Stop the massages if pain develops or if your scar shows an adverse reaction: redness, ↑ warmth, leakage, thickening...

Other Precautions:

Protect your scar from the sun by using a sunscreen lotion with the highest sun protection factor.

³⁰ De Domenico G., *Beard's Massage: Principles and Practice of Soft Tissue Manipulation*, 5th Edition, Saunders Elsevier, 2007, pp. 219-221

WALKING³¹

Following your surgery, you will be allowed to put weight on your leg, partially or totally, as per your physician's instructions. You can use various types of walking aids to make things easier. During the first few days following your surgery, using a **walker** is recommended. The height of the walker will be adjusted to your own height. Your physiotherapist will be present for your first trials, in order to guide you and make sure you can move about safely. Although it is important not to overtax your strength when you start walking, you will still have to increase the walking distance from day to day.

When you are able to walk without a limp with all the weight on your operated leg, it will be time to switch to using a **simple cane**. Here again, your physiotherapist will be the resource person to help you get you through this stage and correct your gait.

ADJUSTING THE HEIGHT OF THE WALKER, CANE, OR CRUTCHES



Adjusting the walker, cane, or crutches is done while you stand up straight, with flat-heeled shoes and your feet slightly apart. Stand between the two handles of the walker or place the tip (bottom) of the cane or crutches approximately 15 cm (6 inches) from your feet. To adjust the height of the hand rests, let your arms hang loose along the walker, cane or crutches, and make sure the hand rests are at the same height as the crease of the wrist. For crutches, adjust the height so that you can place 2 fingers between the top of the crutch and the armpit (shoulders relaxed).

HOW TO WALK WITH YOUR WALKER

- While sliding (rolling) the walker in front of you, walk normally, with equal steps for the operated leg and the other leg.
- Make sure the walker remains close to you: the rear legs of the walker must not be ahead of your feet.
- **Caution:** Do not put more weight on the operated leg than permitted.



HOW TO WALK WITH YOUR CANE OR YOUR CRUTCHES

- If you're using a cane or a single crutch, **you must hold it with the hand opposite the operated leg**. Walk in the following weight-bearing sequence : cane (or crutch), operated leg, non-operated leg; cane, operated leg, non-operated leg... Be careful not to place the cane in front of you. It should be aligned with your foot (ideally with the middle of your foot).
- If you're using two crutches, bring your operated leg forward as you advance both crutches. Push down on the hand rests of the crutches with your hands to bring the other leg forward, making sure you keep your elbows straight and the shoulder rests pressing against your thorax (**do not put your weight on your armpits**: this may cause serious circulatory problems).



³¹ Ordre de la physiothérapie du Québec. Ajuster votre aide à la marche. 2004 (in French only).

- The operated leg must always follow the cane or the crutches in their forward and backward motions. Always take normal steps with your non-operated leg.
- Whatever the walking aid you use, it is important not to limp. Avoid walking with a stiff knee and your foot turned outward. Resume normal motion at knee and hip levels: move in the same way as on the non-operated side.
- You can begin to **walk naturally**, without an aid, when the limp and pain have disappeared.
- Wear shock-absorbing shoes that support your plantar arches.



STAIRS

Climbing up and down stairs is possible after a surgery such as yours, but you must follow certain fundamental rules for as long as you experience pain and weakness.

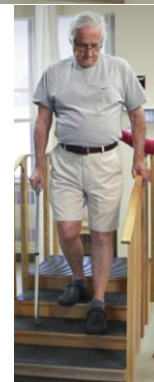
HOW TO CLIMB UP STAIRS

- Always use two means of support: one handrail and one cane/crutch or two handrails.
- Place the cane or crutches close to the first step; **raise your non-operated leg onto the step**; with the support of your hands, raise the cane or crutches and the operated leg simultaneously on the same step; repeat this sequence of movements for each step.



HOW TO CLIMB DOWN STAIRS

- At the start, of course, the cane or crutches and both legs are on the top step; **lower the cane or crutches and the operated leg first**; with the support of your hands, lower the non-operated leg on the same step as the operated leg; repeat this sequence of movements for each step.



Your physiotherapist will give you a demonstration and will accompany you in your first endeavours in stairways. **Do not attempt this by yourself. Never use a walker to climb stairs.**

ACTIVITIES OF DAILY LIVING:

IN THE HOSPITAL AND WHEN YOU RETURN HOME

TRANSFER TO THE TOILET OR A CHAIR:

1. Back up with your walker until the back of your knees touches the edge of the chair or the toilet.
2. Move your operated leg forward, keeping the knee slightly bent. **After a few days**, bend the knee as much as possible in order to use your operated limb more and more.
3. Grip the arm rests of the chair or the toilet safety frame, one hand at a time.
4. Sit down slowly (avoid letting yourself fall into the chair or the toilet).



POSITIONING ON A CHAIR:

1. Use a firm, straight-back chair with arm rests. Increasing the height of the seat makes it easier to get up. A pillow in your back is allowed.
2. It is important not to remain seated too long to avoid ankylosis and swelling.

POSITIONING IN BED:

1. When you are lying down, it is important to maintain a proper alignment of the body.
2. Lying on your side is permitted, but will probably be more comfortable if you lie on your non-operated side. Place a pillow between your legs so as to maintain a proper alignment and to be more comfortable. Avoid contraindicated movements.
3. **To prevent respiratory complications**, it is important to change positions while lying down.

TRANSFER TO BED (IDEALLY ON THE NON-OPERATED SIDE):

1. Sit on the edge of the bed, as you would do to sit on a chair.
2. Using your arms, move your buttocks backwards,
3. While you're moving backwards, turn your body gradually so as to face the foot of the bed.
4. Raise your legs slowly, while making sure to maintain a proper alignment of the operated leg. Be careful to avoid any contraindicated movements. You could make it easier to lift the operated leg by using a strap tied at the ankle or by crossing your legs at the ankles and using the non-operated leg to lift the operated leg.
5. When both legs are up on the bed, you can lie down.
6. To get out of bed, reverse the process



ARRANGING THE BATHROOM:

It may be necessary to make modifications to your bathroom to facilitate your return home. The occupational therapist can discuss the following bathroom modifications with you at the pre-admission clinic visit:

- ☐ Installing a toilet safety frame or an elevated toilet seat, in order to facilitate sitting on the toilet and getting back up (optional).
- ☐ Removing bathtub sliding doors and replacing them with a shower curtain (optional).
- ☐ Installing a bath transfer bench or a bathboard in the bathtub, and/or a shower seat in the shower unit (optional).
- ☐ Installing non-slip mats inside and outside the bathtub.
- ☐ Installing a hand-held shower in the bathtub/shower unit (optional).
- ☐ Installing wall-mounted grab bars (optional). Never use the towel bars or the soap holder for support.

PERSONAL HYGIENE:

For your personal hygiene, the use of a bath mitt will prevent dropping the bar of soap. The use of a long-handled sponge will allow you to reach the more difficult areas (back, legs and feet) and reduce the risks of falls. Also, this will avoid contraindicated flexion of the operated hip. A hand-held shower allows you to remain seated during your shower, which reduces the risks of falls. Installing wall-mounted grab bars adds an element of safety during your bath transfers. To dry yourself, wrap a towel around a long-handled sponge or reaching tongs.

TRANSFER TO THE BATHTUB/ THE SHOWER UNIT:

After your surgery, you can choose to take your shower standing up or sitting down. You should simply evaluate your strength and the level of pain you are experiencing at this stage of your convalescence. You must not sit on the bottom of the bathtub, because you may have difficulty getting back up, not to mention the high risk of contraindicated movements.

The method to use a bath transfer bench. Follow these steps:

1. Spread a towel over the transfer bench so you can slide more easily.
2. Sit down on the end of the bench that is outside the bathtub.
3. Grab the safety handle on the bench then slide your bottom at the middle of the bench.
4. Move one leg into the bathtub, then the other.
5. To get out, slide your bottom back to the end of the bench then take out your legs. Push on the bench to stand up.



The method to get into the shower unit

Follow these important steps:

1. Approach the shower using your walker.
2. Get your non-operated leg in first.
3. Grab the vertical bar (if installed) for support, and then move your operated leg inside.
4. Place one hand after the other on the shower seat (if installed) and sit down.

DRESSING:

It is preferable to perform this activity while sitting down on the edge of the bed or on a chair. Normally, the greatest difficulty encountered by operated individuals is to put on pants, underwear, socks and shoes. You can ask for help from your caregiver until you are flexible enough. If needed, we will indicate the recommended technical aids. These aids are **optional**.

- **Socks**

The sock aid is a tool which enables you to put on socks. The reacher are used to take them off. Your occupational therapist will show you the proper technique.



- **Shoes**

The easiest to put on are “loafer” types. A long-handled shoehorn can facilitate inserting the foot into the shoe and pulling it out. Your shoelaces can be replaced by elastic laces, since you will not be able to bend down to tie them. You can also wear shoes with Velcro fasteners and use a reacher to close the fasteners.



- **Pants and Underwear**

You can put them on and take them off using a reacher. **Slide in the operated leg first**, then the other leg, then pull up the garment. To pull it up to the waist, get up using the armrest of the chair for support. Place one hand in the middle of the walker while the other hand pulls up the garment.



INSTRUMENTAL ACTIVITIES OF DAILY LIVING WHEN YOU RETURN HOME

ARRANGING YOUR HOME:

- ☐ Remove carpets, obstacles, electrical wires, and arrange your furniture so that you may circulate freely (with a walker).
- ☐ Arrange the rooms so that you can avoid using the stairs, for instance, by arranging a bedroom on the first floor. If you still have to use the stairs, have handrails installed, if necessary.
- ☐ Arrange to have a firm bed, high enough (higher than the hollow of the knee) to facilitate your transfer (if the bed is too low, you will need much more effort to get up). If necessary, elevate your bed with wooden blocks or add another mattress. If the bed is too high consider removing the bedspring. Do not use a step.
- ☐ Place all the objects that you use regularly at a height where they will be easily accessible without having to bend down or climb on a stool to reach them (bedroom, kitchen, bathroom, closet, laundry room...).
- ☐ Provide adequate lighting for night time in your room, hallway and bathroom, as well as some space to keep all you might need during the night close to the bed.
- ☐ Provide a high chair (seat higher than the hollow of the knee) with armrests you will be using after your surgery.

HOUSEKEEPING:

Make an effort to do as many tasks as possible by yourself, taking frequent breaks, to accelerate your rehabilitation while saving your energy. Sit down to do certain tasks, such as: preparing meals, ironing, odd jobs.

For the first 6 weeks, avoid doing heavy housework, such as: house cleaning, washing floors and windows, lawn mowing, snow removal. Do your laundry step-by-step in order to carry and manage light loads of clothes.

CARRYING LOADS:

To carry objects, you can use an apron fitted with pockets, a bag tied to your walker (avoid overloading, however) or a backpack. You can use a table or chair mounted on casters to carry more objects. In your closets and cupboards, you should place frequently used objects on easy-to-reach shelves (from shoulder level to thigh level).

Avoid carrying objects in your hands when you are moving around with a walker or cane. If you cannot avoid doing so or you are walking without a cane, carry the load in the same hand as the operated side.

Be aware that, should preparing meals or housekeeping become overly difficult, certain community organizations can provide low-cost assistance.

GETTING OUT-OF-REACH OBJECTS:

To reach objects placed lower than knee level, use long-handled reacher. Never use a stepladder or chair to reach objects placed higher than shoulder level. To get an object off the floor, use a reacher. When you get stronger, you will be able to lean on a solid surface (e.g. a counter) and pick up the object on the floor by extending your operated leg behind you. Be careful not to put excessive strain on your back.



SEXUAL ACTIVITY:

You can resume sexual activity as soon as you feel better. Until you are completely healed, it is recommended to assume a comfortable position **while following instructions on contraindicated movements specific to your surgery and your other conditions.**

DRIVING:

- The waiting period required before driving a car after your operation is between 6 and 8 weeks. **You must have your surgeon's approval before resuming this activity.**
- During your recovery period, even as a passenger, long car trips are not recommended.
- At preadmission, your occupational therapist will show you how to perform safe transfers.

Société d'assurance automobile du Québec (SAAQ) documents³² indicate that, « in order to drive safely, a person must be able to turn the steering wheel entirely (stop to stop) and operate the controls of the vehicle with ease, speed and precision, especially in case of emergency, and simultaneously when required ».

TRANSFER TO A VEHICLE (FRONT SEAT):

1. Stand on the pavement, not on the sidewalk.
2. Make sure someone has adjusted the seat of the car as far back words as possible and lowered the back of the seat before you climb aboard.
3. Cover the car seat with a firm cushion (if the seat is to low) and with a plastic bag, to make the surface more slippery (and facilitate transfers).
4. Approach the seat with your back to the car, using your walker, place one hand on the back of the seat and the other on the lowered window or on the seat (never on the door of the vehicle).
5. Sit down on the seat and slide back until your knees are well supported by the seat.
6. Raise your legs one by one into the car. Make sure to always maintain a perfect alignment of your leg. You can lower the position of the back end seat if the door frame require an important hip flexion of your operated leg.
7. When both leg are in the car, adjust the position of the back end seat to be comfortable.



Reverse the process to get out of the vehicle, first reclining the back of the seat and sliding the seat back.

³² Guide de l'évaluation médicale et optométrique des conducteurs au Québec, Édition révisée 1999, Société de l'assurance automobile, ISBN 2-550-29251-0 (in french only)

RECOMMENDED EQUIPMENT

Several technical aids can make your life easier. You could obtain them from the CLSC or purchase them from an orthopedic appliance supplier (see the list at the end of this document) or from a pharmacy. Remember that the CLSC can help you out on certain occasions, but will not guarantee the provision of equipment. Equipment rental could also be profitable for some items.

Below is a list of equipment that could be useful. Obtain the ones that are recommended by your occupational therapist at preadmission.

To wash up (optional):

- | | |
|--|--|
| <input type="checkbox"/> Bath mitt or sponge | <input type="checkbox"/> Bath transfer bench, bathboard or shower seat |
| <input type="checkbox"/> Disposable hypoallergenic wipes | <input type="checkbox"/> Bathtub safety handle, wall-mounted grab bars |
| <input type="checkbox"/> Liquid soap or bar soap on a string | <input type="checkbox"/> Non-slip mat |
| <input type="checkbox"/> Long-handled brush or sponge | <input type="checkbox"/> Hand-held with controls on the shower head |

To use the toilet (according to your situation):

- | | |
|---|--|
| <input type="checkbox"/> Elevated toilet seat, with or without armrests:
2 inches <input type="checkbox"/> 4 inches <input type="checkbox"/> | <input type="checkbox"/> Toilet safety frame |
| | <input type="checkbox"/> Commode chair |
| | <input type="checkbox"/> Urinal |

To walk:

- | | | |
|--|-------------------------------|---|
| <input type="checkbox"/> Crutches (optional) | <input type="checkbox"/> Cane | <input type="checkbox"/> Walker (standard or two-wheeled) |
|--|-------------------------------|---|

To dress (optional):

- | | |
|--|---|
| <input type="checkbox"/> Reacher (26 inches) | <input type="checkbox"/> Slip-on (loafer) or Velcro-fastened shoes, wide enough to avoid pressure due to foot swelling, with non-slip soles and flat heels that are shock-absorbing and support your plantar arch.* |
| <input type="checkbox"/> Long-handled shoehorn | |
| <input type="checkbox"/> Sock aid | |

For various tasks (according to your situation):

- ☐ Tray for your walker

For your self-care:

- ☐ Thermometer
- ☐ Bag of ice or frozen vegetables
- ☐ Alcohol swabs or cotton balls with a bottle of alcohol
- ☐ Compresses, medical-type adhesive tape
- ☐ Analgesics (ex : Tylenol®)

PREVENTING FALLS

Falls can happen to anyone, including you. After your surgery, your balance might not be as good as usual, so it will be of utmost importance not to take any chances to avoid any falls, as well as their unfortunate consequences.

- ☐ See a specialist about any vision or hearing problems. Wear your glasses or hearing aids if you have them.
- ☐ See your family physician about any loss of feeling in your feet.
- ☐ Clear corridors by removing any obstacles from the floors, hallways and stairways.
- ☐ Take your time when climbing stairs, and use the handrails for as long as necessary. As much as possible, do not carry loads on stairs.
- ☐ Install non-slip mats, especially in wet areas such as the bathtub and shower.
- ☐ In the shower, use liquid soap or bar soap on a string.
- ☐ Make sure lighting is sufficient, even at night: easy-to-reach bedside lamp, night lights...
- ☐ Rearrange the furniture so that you can walk around freely with a walker or a cane.
- ☐ Move about carefully when you are under the influence of medication.
- ☐ Get up slowly from a seated or lying position.
- ☐ Ask for help to get objects that are too high, heavy or difficult to handle. Place frequently used objects at a height where you can reach them easily, without having to climb on a stool or chair.
- ☐ Keep your cell phone nearby in case of an accident. For individuals living alone, more sophisticated personal alert systems exist, but they're also more expensive. Discuss this with your occupational therapist. Do not hurry to answer the phone. Keep emergency numbers nearby, in an easy-to-read format.
- ☐ Indoors, wear non-slip shoes or slippers. Outdoors, wear non-slip shoes or boots. During the winter, you can wear special soles with metal cleats under your boots. Do not walk on wet grass.
- ☐ Leave your pets with someone you trust if you're afraid they might cause you to fall. Otherwise, have them wear a collar with a bell so you know their whereabouts. Do not let their toys clutter the floor.
- ☐ Do not carry too many parcels; instead, use delivery services or a bundle buggy or shopping cart.
- ☐ If you have fallen in the past, try to identify the cause to prevent falls in the future.
- ☐ Be aware of your limitations and act accordingly.

Some training on fall prevention is provided in the community. Find out more about the Stand Up program (*PIED*)³³.

³³

CISSS Outaouais, <http://santepublique-outaouais.qc.ca/en/news/seniors/falls/>

PROBLEM-SOLVING METHOD

- ☐ Before you begin an activity, stop and ask yourself:
 1. Am I doing a risky movement?
 2. If the answer is no, you can do the task, taking into account your pain and your tolerance threshold.
 3. If the answer is yes, change your technique, use the suggested adaptive equipment, ask for help, or just do not perform the task.
- ☐ Before you start on a project, make sure you have enough energy to accomplish the whole activity, or plan periods of rest.
- ☐ Sometimes, it becomes necessary to reorganize your environment, such as, the place where you will sit, the things you will use...
- ☐ Your therapist will teach you specific methods for reaching objects placed too high or too low. At times, reaching tongs can be very practical!

RESOURCES

Several websites provide information on your surgery, on osteoporosis and fragility fractures, on your pathology or on living with a prosthesis. We've listed a few for you:

<http://santepublique-outaouais.qc.ca/en/news/seniors/falls/>

www.coa-aco.org

www.myjointreplacement.ca

<http://arthritis.ca/home>

<http://whenithurtstomove.org/>

<http://www.osteoporosis.ca/>

<http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/diseases-maladies/seniors-aines-ost-eng.php>

<http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/life-vie/fp-pc-eng.php>

SUPPLIERS

SPECIALIZED EQUIPMENT (Walker, cane, toilet safety frame, bathboard, etc.)

Côté Santé – Équipements médicaux

355, boul. Gréber, Gatineau-G

819-246-2227

195 rue de l'Atmosphère suite 103 Hull

819-777-3227

Les entreprises médicales de l'Outaouais - Ergosanté

179, boul. St-Joseph, Gatineau-H

819-776-5363

131 boul. Gréber, Gatineau-G

819 205-9111

Médi-Santé

819 243-1717

867, boul. St-René ouest, Gatineau-G

GRAB BARS, BATHBOARDS, HAND-HELD SHOWER

Hardware, stores of your region

Canadian Tire, Home Depot, Réno-Dépôt, Rona, etc.

Pharmacy (Jean Coutu, Brunet, Pharmaprix)

GROCERIES

Internet site of your favourite grocery store

to order and arrange delivery. In certain cases, phone ordering is available.

www._____

YOUR NOTEBOOK

PRE-ADMISSION VISIT

ADMISSION TO THE HOSPITAL

FIRST FOLLOW-UP APPOINTMENT WITH THE ORTHOPAEDIC SURGEON

SUBSEQUENT FOLLOW-UP APPOINTMENTS WITH THE ORTHOPAEDIC SURGEON

YOUR HEALTH PROFESSIONALS

Orthopaedic surgeons: _____

Surgical assistant nurses: _____

Nurses: _____

Physiotherapists: _____

Occupational therapist: _____

Social worker: _____

Dietitian: _____

Others: _____

Ask all the professionals you meet throughout your continuum of care to write their names, so that you may consult them, if necessary.

**Centre intégré
de santé
et de services sociaux
de l'Outaouais**

Québec 

Québec 



**Santé
Canada**

**Health
Canada**

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