

Tips For A More Speedy And Comfortable Recovery After Elective Hip Replacement



Conceived and written by Dr. Jack Hirsh* (former patient and physician).

With review and contributions from health care professionals from Hamilton Health Sciences including Dr. Mitchell Winemaker (Orthopaedic Surgeon); Helen Bishop (Physiotherapist, BHScPT); Lynne Taffs (Physiotherapist, BHScPT); and Danielle Petrucci (MLIS, MSc).

Review also conducted by Drs. James Lawson, Gordon Guyatt and David Sackett (physicians), and by Anna Green (BHSc OT, MSc Rehabilitation Science, RYT).

Illustrations by Anna Green and C.J. Steinberg.

** Jack Hirsh, CM, MD, FRCP(C), FRACP, FRSC, DSc. Dr. Hirsh is Professor Emeritus in the Department of Medicine at McMaster University in Hamilton, Ontario. He was the Founding Director of the Henderson Research Centre, and is a former Chairman of the Department of Medicine.*

Table of Contents

Introduction	2
What you can expect in the early post-operative period (in hospital).....	3
What to expect when you are discharged home	3
Constipation.....	4
Speed of recovery	4
Why is muscle strengthening important?.....	5
Getting physically fit before surgery	5
Increasing cardiovascular fitness.....	7
Muscle strengthening exercises	7
Preventing blood clots.....	11
Tips to lessen the discomfort of movement during post-operative convalescence	11
Post-operative exercises.....	16
Getting in and out of a vehicle	17
Avoiding dislocating your hip	18
Various ways to use a cane.....	19
Keeping up your spirits and motivation.....	19
Talk to Someone Who Has Been There... <i>Ortho Connect</i>	20
Important Dates and Appointments	21

INTRODUCTION

An elective hip replacement is a common surgical procedure that improves quality of life for the vast majority of patients who have the operation. I wrote this brief manual from the perspective of a recent recipient of a total hip replacement and as a physician who has been involved in the post-operative care of hundreds of patients who have had this procedure. Prior to my surgery, I read the literature provided to me and went online for more information. I thought I was prepared, but I was not. Therefore, with the encouragement of my orthopaedic surgeon, I wrote this manual.

This manual has been reviewed by orthopaedic surgeons and physiotherapists from the orthopaedic program, and from some of my other colleagues at McMaster University and Hamilton Health Sciences. It is intended for patients who are candidates for elective hip surgery. Ideally, this should be read months before surgery so that prospective patients can take advantage of one of our most important recommendations, which is to get as fit as possible before surgery. Pre-operative fitness will make the recovery period more speedy and comfortable.

You will be doing yourself a favour by getting as fit as you possibly can before surgery.

This manual provides advice about the following topics:

- What to expect in the early post-operative period.
- What to expect when you are discharged home.
- Management of constipation.
- The speed of recovery.
- Exercises and rehabilitation, both pre-operatively and post-operatively.
- The timing of the first dose of blood thinner used routinely to prevent blood clots.
- Tips for moving in bed, getting out of bed, sitting, standing, walking, bending down, getting in and out of a car, and using a walker and cane.
- Information on peer support.

There are several excellent manuals that explain the hip replacement procedure and provide valuable advice to the patient. They do not, however, cover many of the topics discussed here, such as the importance of optimal physical fitness before surgery and strategies to move about in the early post-operative period. Therefore, I wrote this manual to fill in the gaps.

Dr. Jack Hinsh

What you can expect in the early post-operative period (in hospital).

For the first few days after surgery you will spend a lot of time lying on your back. Within a day or two of your operation you will be encouraged to get out of bed and take your first steps using a walker under the supervision of a physiotherapist. This can be scary because you will also be required to put some weight on the operated leg. Your leg will feel painful, and very heavy, and you will wonder whether it will support any weight. Surprisingly it will support some of your weight and allow you to take steps using a walking aid.

Post-operatively, the pain in your hip is caused by injury to muscles and other structures around it. The swelling and heaviness is caused by blood that seeps out of cut muscles and the raw ends of the thigh and hip bone that had to be removed to accommodate the prosthetic joint.

What to expect when you are discharged home.

If all goes well, you will be discharged from hospital after three days and will start walking with the aid of a walker, and later a cane. In hospital you will have the reassurance and help of the physiotherapy and nursing staff. Once at home, you are on your own, aside from some support from the visiting home nurse and physiotherapist.

- You will be walking with the assistance of an aid.

Typically you will start with a walker and then progress to a cane. A cane is more convenient but requires more strength in your legs and better balance.

- You will be uncomfortable sitting in one position for more than 30 minutes, so change positions often.
- You will have difficulty sleeping because of discomfort. Take naps during the day to prevent sleep deprivation.
- You will have difficulty sitting on the toilet, and for the first week or two you might be constipated.
- It will take longer to move around. Anticipate toilet needs and start your trek to the toilet before it becomes urgent.
- Some pain while walking can be expected for weeks or even months, but if you stick to your physiotherapy and exercise program your rehabilitation will be accelerated.

Set yourself realistic goals and do the exercises prescribed by your physiotherapist.

Constipation.

- You will be constipated after your operation because the painkillers you receive in the early post-operative period (morphine and codeine derivatives) interfere with the nervous system of the bowel.
- This will resolve after about a week as you return to a regular diet and the effect of the drugs wears off.
- Laxatives such as Restoralax, Miralax and Laxaday starting one or two days after surgery, as well a high roughage diet (high grain cereals, fruit and vegetables) and drinking lots of water, accelerate recovery.
- Sitting on the toilet is going to be uncomfortable at first because your swollen thigh makes sitting difficult. The discomfort will improve rapidly as the swelling in your thigh resolves, usually after six to 10 days.
- Make sure that the seat of the toilet is comfortable and at the right height. You should be able to sit with the hip of your operated leg higher than your knee (so that your operated hip is bent less than 90 degrees). The use of a raised toilet seat or a commode is recommended if needed to maintain the hip flexed less than 90 degrees.

Speed of recovery.

- The speed of recovery varies between patients and is influenced by your level of fitness before the operation and your diligence in performing post-operative physiotherapy.
- Many people who have hip replacement surgery are not fit before surgery because of hip pain.
- Whether you are fit or not, you can still improve your fitness with a concerted effort.
- Some people are walking unassisted within a month while others require three to six months to reach that goal.
- For sporting enthusiasts (golf, tennis, etc.) it's best to wait until you get clearance from your orthopaedic surgeon, when you are seen during your six week post-operative appointment.

Your recovery will be faster if you are fit before your operation and if you follow the exercise program prescribed by your physiotherapist.

Why is muscle strengthening important?

Rehabilitation starts pre-operatively by strengthening key muscles. In the first few days after your operation you will need to move around in bed, get out of bed and take your first steps in a walker. These activities will be easier if you strengthen your muscles.

- Soon after surgery you will rely on your abdominal and back muscles to move around in bed.
- When you take your first steps using a walker, strength in the thigh muscles of your non-operated leg will make it easier to stand, walk with assistance and sit.
- Strength in the thigh muscles of the operated leg will also make it easier to walk.
- Strength in your shoulders, arms and wrists will make it easier to push yourself up from a lying to sitting position, from a sitting to standing position, to lift the walker and to operate the walking cane.

You can help yourself enormously and reduce discomfort by strengthening the muscles that you use for your daily activities. Start pre-operatively and continue after your operation.

Getting physically fit before surgery.

- Most people who have a total hip replacement have hip pain and reduced mobility for many months before surgery.
- As a result, activities are usually reduced, leading to lost fitness and an unwelcome gain in weight.
- Despite the pain, getting as physically fit as possible before your hip surgery is very important because it improves post-operative rehabilitation and reduces discomfort.
- We understand that getting fit is not easy, but by focusing on parts of your body that are pain-free and important for your post-operative rehabilitation, you can increase your fitness without aggravating your painful joint.

- Being overweight makes the post-operative period more arduous as it makes it harder to move about and to stand and sit after the operation.
- Therefore, if you are overweight do yourself a big favour by entering a weight reduction program, which can be coupled with a fitness program prior to your operation.

Getting physically fit and reducing your weight will take several months to improve your fitness, so start as soon as you possibly can.

Fitness programs are more effective if they provide written instructions that are realistic, practical and structured to fit your level of fitness, weight and disability. The American Fitness Institute suggests that to get the most out of a program, exercises should be performed regularly and the intensity should be increased gradually. It is also a good idea to break up the boredom by having a variety of exercises to choose from.

The pre-operative program can be approached in several ways.

- If you are experienced in physical fitness you can plan your own program.
- If you are inexperienced, you can employ a personal trainer or ask a physiotherapist to prepare a home-based program for you.
- If you have access to a physiotherapist, you should plan the program with her/him.
- The exercises are standard and designed to focus on the muscle groups you will need most during your post-operative rehabilitation.

For the sake of convenience, we will classify exercises as those that increase cardiovascular fitness and those that specifically increase muscle strength.

Increasing cardiovascular fitness.

Walk, swim or cycle for at least half an hour every day. These activities help you to develop stamina, strengthen your legs and reduce or maintain weight. If pain makes walking difficult, and you have access to a warm swimming pool, you can "walk" in the water. The water will give support to your legs and hips and will often reduce the pain while you exercise. Swimming is an excellent form of exercise, because it can be performed without causing hip pain, and it develops arm and leg muscles.

Likewise, using an exercise bicycle is a very good way to strengthen the all important leg muscles. Riding a bike takes much of your weight off the hips and can usually be performed without aggravating hip pain.

Choose the mode of exercise that suits you best. Increase your exercise time gradually and record your performance in a diary. You will be pleased with your progress.

Muscle strengthening exercises.

Post-operatively you will be required to move around in bed, sit, stand and walk with the aid of a walker, and later a cane. Certain muscle groups are used to carry out these maneuvers. The stronger these muscles are pre-operatively, the easier it will be to function in the early post-operative period.

The muscles used are:

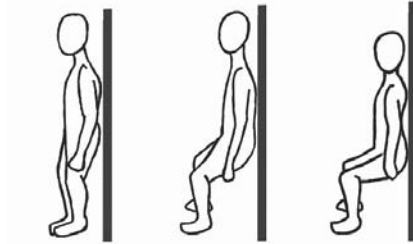
- Thighs (quadriceps) – for standing, sitting and walking.
- Arms and shoulders (particularly triceps) – for moving around in bed and to use walking aids.
- Wrists – for helping you to move around in bed and to use walking aids.
- Core (abdominal and low back) – for moving around in bed and for helping you to sit up.

Ideally, all exercises should be repeated up to three times or more. If you are unable to repeat them at first, don't be discouraged. Just do the best you can, and as you improve your fitness, you will be encouraged to find that you can do more repetitions.

Strength in your leg, abdominal and back muscles and in your shoulders, arms and wrists will make it easier to stand, sit, move around in bed and walk.

Thigh (quadriceps) exercises:

1. Squat against the wall - with your back to a wall, place your feet hip width apart and about a foot from the wall. Bend your knees to no more than 90 degrees and hold for 30 seconds to one minute. Repeat three times if you can.



2. Knee extension with an ankle weight - in a seated position with wrap-around ankle weights of two to 10 pounds, straighten and bend at the knee. Repeat for three sets of 10 if you can.

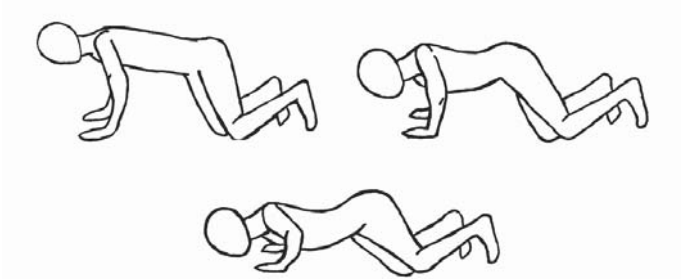


Wrist, arm (triceps) and shoulder exercises:

1. Rowing motion with hand weights - in either a seated or standing position, hold two to 10 pound weights in one hand and bend your elbow. Reach your bent elbow behind you in an upward motion. Repeat 10 times (or as frequently as your strength permits) and then switch to your other hand.



2. Modified push-up (knees on the ground) - place your palms on a solid floor, directly under your shoulders. Bend your knees so they gently touch the ground but are behind your hips. Keeping your elbows close to your side, slowly lower and lift your torso by bending and straightening your elbows. Inhale as you press up. Exhale as you lower.
Please note: check with your orthopaedic surgeon or physiotherapist before attempting this exercise.



Core (abdomen and low back) exercises:

1. The Plank - (a) Many people will not be able to perform a standard plank exercise, but you can perform a modified plank by supporting the weight of your upper body on your elbows and the weight of your lower body on your knees. Hold this position as long as you can. (b) If you are able, you can perform the standard plank exercise by supporting your upper body on your elbows and your lower body on your toes. Hold this position as long as you can, and repeat it three times.
Please note: check with your orthopaedic surgeon or physiotherapist before attempting this exercise.

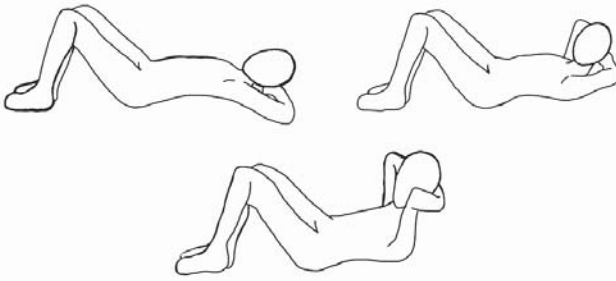
(a)



(b)

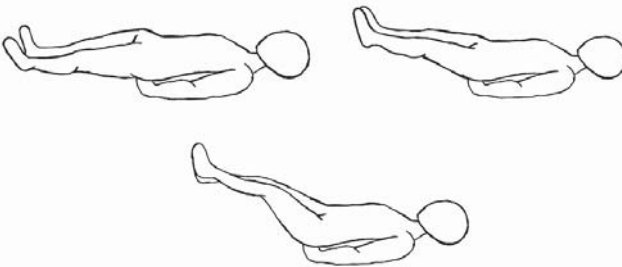


2. Abdominal crunches for upper abdominal muscles - lying on your back with your knees bent, rest your hands behind the base of your head and lift your chest towards the ceiling. Try to keep your elbows open wide and pull your belly in as you lift. Exhale as you lift and inhale as you lower. Try not to lower completely to the ground until you have completed at least 10 repetitions.



3. Leg lifts for lower abdominal and low back muscles - lying on your back, place your palms facing the ground under each buttock. Slowly lift your straightened legs together while you inhale, then lower even more slowly as you exhale. Try not to touch your legs down completely until you have completed at least three repetitions. Try to keep your lower back pressed into the floor.

Please note: check with your orthopaedic surgeon or physiotherapist before attempting this exercise.



Preventing blood clots.

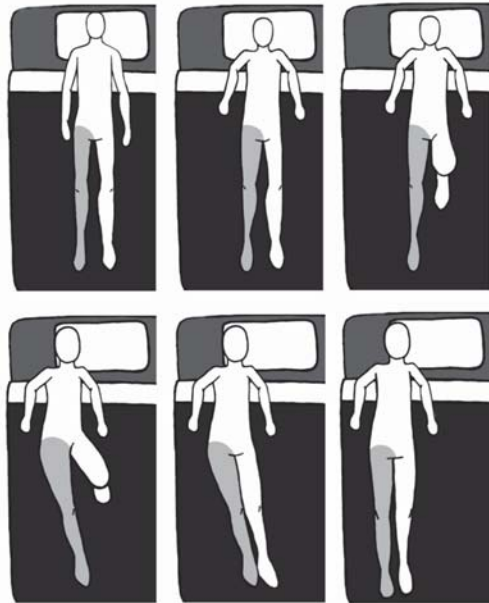
In the past, blood clots in the leg were a feared complication of having hip replacement surgery because these clots could break off and travel to the lungs to form dangerous pulmonary emboli. The risk of blood clots and pulmonary embolism is much lower now, thanks to a combination of less traumatic surgery, early mobilization and the use of blood thinners.

Blood thinners prevent blood clots if they are started between 12 and 24 hours after surgery.

Tips to lessen the discomfort of movement during post-operative convalescence.

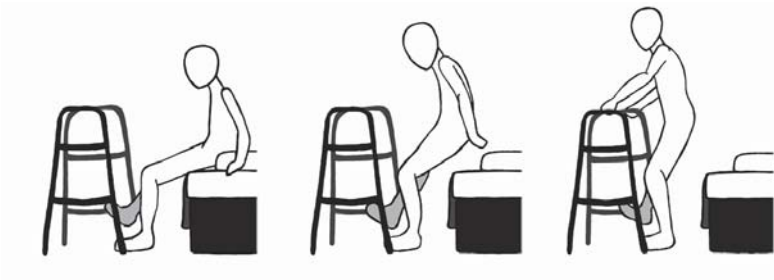
Moving sideways in bed.

- The best way to move sideways in bed is to bend the non-operated leg, plant the foot flat on the bed and do small hip bridging to maneuver your pelvis to the edge of the bed (or couch).
- You can also use your elbows to lift your shoulders and back as part of the bridging maneuver. The pelvis moves sideways first, followed by the shoulders and upper body. Then, after lying flat on the bed, move your legs in line with your body. The legs should remain parallel and close together during all movements.
- If you are moving in the direction of the operated leg, you can use your non-operated leg to gently push the operated leg towards your intended position.
- Progress slowly, making frequent, small lateral movements.



If you are still using a walker or if you are in a chair without arm rests.

- Have both hands flat on the bed and your non-operated leg flexed at the hip and knee and your foot firmly on the ground.
- Press down with both hands to stand and then reach forward and grasp the handles of your walker.
- Your operated leg should be in front of your other leg and can either be kept clear of the floor or resting gently on the floor until you stand and grasp the handles of your walker.



If you have graduated to a cane.

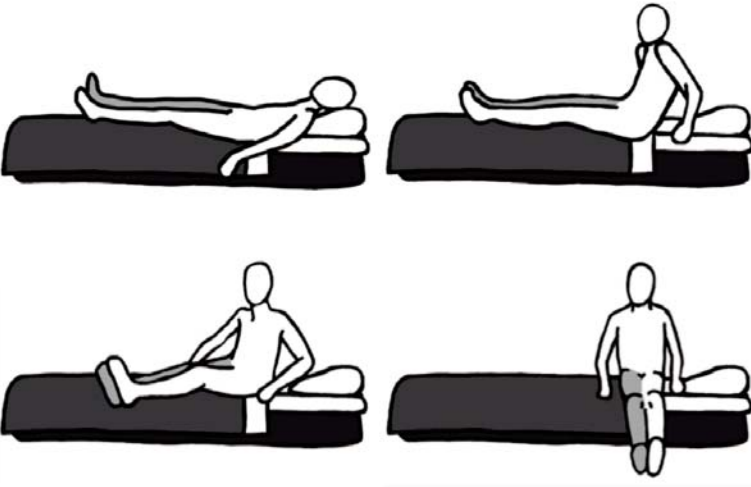
- Have your non-operated leg flexed at the hip and knee and your foot firmly on the floor.
- Use the arm on your non-operated side to stabilize your position and grasp the cane with your other hand (on the operated side).
- With one motion, push down on the cane and straighten your non-operated leg.
- Your operated leg should be in front of your other leg and either be kept clear of the floor or resting gently on the floor until you stand.



In the early post-operative period, when the operated leg is swollen and feels weak, movement of the legs laterally can be made easier by having plastic sheets under your heels. You can also fashion a sling to place under the foot of your operated leg and use your arms to lift it gently and to the side. You should practice these maneuvers in the hospital, under the supervision of your physiotherapist.

Standing when you are lying in bed or on a couch.

- Move sideways in bed as described above, until your body is parallel to the edge of the bed (or couch).
- Then use your elbows to lift your upper body, pivot on your bottom by pressing the palms of your hands into the bed and swing your legs as a unit so that you are sitting on the side of the bed with your legs dangling.



Sitting in a chair.

- It will be difficult for you to find a comfortable sitting and reclining position for a number of weeks after your operation.
- After 20 to 30 minutes of sitting in one position you will likely develop an ache in the region of your operated hip.



Reduce discomfort when sitting by changing your position frequently.

- If you can, have several appropriately fitted chairs available.
- The chairs should have sturdy arm rests and be well-padded with cushions to relieve pressure on your bottom and back.
- Arrange padding and your wedge cushion so that your hips are higher than your knees to ensure that you don't put strain on your new joint by flexing the hip joint beyond 90 degrees.

Standing when you are sitting in a chair.

If you are still using a walker.

- Place both hands firmly on the arm rests and have your non-operated leg flexed at the hip and knee and your foot firmly on the ground.
- Then in one motion, push with both arms and straighten your non-operated leg.
- Your operated leg should be in front of your other leg, with the foot resting gently on the floor until you stand and grasp the handles of your walker.



If you have graduated to a cane.

- Place your hand onto the non-operated side on the arm rest.
- While your non-operated leg is flexed at the hip and knee and your foot is firmly on the floor, grasp the cane with your other hand (on the operated side).
- Then in one motion, push with both arms and straighten your non-operated leg.
- Your operated leg should be in front of your other leg and your foot should be resting gently on the floor until you stand.



Bending down.

You should avoid bending from the waist. Use your gripper to pick up objects. If you are very fit and have sufficient strength in your non-operated leg, you can bend down using the following maneuver.

Please note: This is a difficult maneuver for the elderly, and requires strength. It is not recommended for the vast majority of patients seen in home care. Check first with your physiotherapist before attempting it.

- Hold the cane in your hand on the operated side and bear your weight on your non-operated leg and cane.
- Bend your body forward and move your operated leg behind the other to make a straight line with your body.
- Bend your knee of the operated leg, supporting yourself with the thigh muscles of your non-operated leg and the cane on the operated side as you lean forward and down.



Post-operative exercises.

You will receive explicit instructions from a physiotherapist and should do these every day. You will begin to walk, first with the aid of a walker and then with a cane.

When can I start to walk outside?

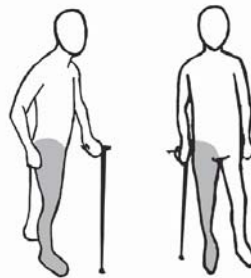
- Start with frequent, short walks inside.
- Move outside when the pain and discomfort of walking are tolerable and you are confident in your balance.
- Bring a companion for the first few trips outside.
- Try to choose a route without hills.
- Some people are able to venture outside with their walker and then their cane in the second post-operative week, while others take more than a month to do this. It depends on your level of fitness and motivation. Remember, your progress and post-operative fitness will improve as you increase the intensity of your exercise.

Can I over-do the exercise?

As long as you don't bend your operated leg into forbidden positions (e.g. crossing it over the other leg and flexing the hip beyond 90 degrees), and as long as the pain is tolerable, there is no evidence that walking will cause permanent damage. Rather, walking will improve your muscle strength and balance.

It is best not to take painkillers before embarking on your daily walks, because the level of discomfort that you might feel during your walks provides you with the signal to stop and rest.

When you stop to rest, and you are using a cane, change hands and lean on the cane using the arm on the operated side.

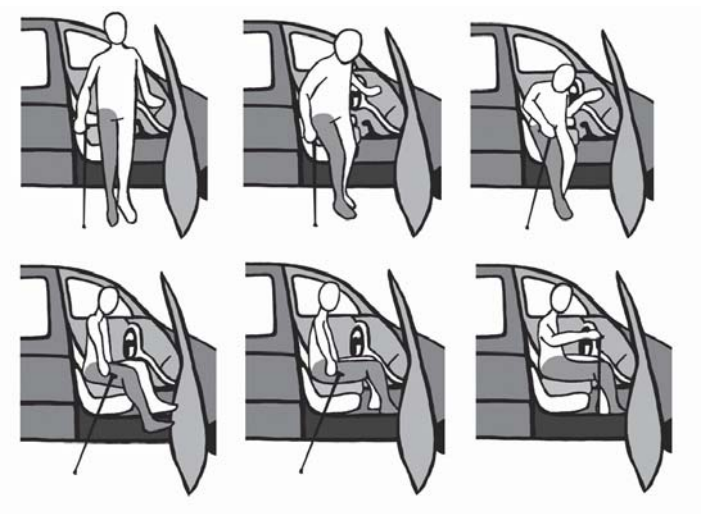


How far can I go?

- It is a good idea to start the day with the exercises prescribed by your physiotherapist.
- Start with short walks of about 100 meters and gradually extend the distance every two or three days.
- It's okay to stop during your walks to rest.
- Short walks, several times a day, are better than one long walk.

Getting in and out of a vehicle.

- The approach is similar to sitting and standing.
- Place a wedge cushion on the seat with its plastic wrapping on to make it easier to slide your bottom through 90 degrees.
- Back up to the seat so that you are touching it with the back of your legs.
- With the aid of your cane in your hand on the operated side and weight on the non-operated leg, lower yourself to the seat.
- If a surface (such as the dash board) or hand grip is within reach, use the hand on your non-operated side to stabilize your movement.
- Once seated, with legs together, swing your body around through 90 degrees and face the front of the vehicle.
- Make sure that the height of the seat, plus the added wedge cushion, positions you so that your hips are higher than your knees.



To get out of the vehicle, reverse the process.

- With the door wide open and a clear flat surface next to the vehicle to stand on, swing your legs through 90 degrees and lower your feet to the outside surface.
- With your cane in your hand on the operated side, and your weight on the non-operated leg, push yourself up to a standing position using the hand on your non-operated side to stabilize the movement.

Avoid dislocating your hip.

You will be told to avoid certain movements and positions of your hip which increase the risk of dislocation.

- Avoid crossing legs when you sleep by placing a pillow between your knees.
- Avoid hyper-flexion of the hip by ensuring that when you sit, you are tilted so that your hips are higher than your knees.
- Sudden rotational movements and forced extension can be avoided by ensuring that you take your weight on the non-operated leg and arm when sitting or standing while keeping the operated leg suspended in front of the other leg.
- The risk of dislocation decreases with time and is slight at three months, but some risk remains and certain extreme yoga and Pilate maneuvers should always be avoided. Clear your yoga or Pilate positions with your orthopaedic surgeon or physiotherapist before attempting to do them.
- The other less common way of dislocating your hip is by twisting away from the operated leg when it is extended or hyper-extended. This can occur when reaching for an object on your night table opposite the operated leg. Always turn on your side to do this, and as a general rule learn to move your feet or toes in line with your chest/torso.

Don't cross your operated leg over your other leg.

Don't flex your hip on the operated side beyond 90 degrees. Avoid sudden rotational or forced extension.

Various ways to use a cane.

Your cane is your good friend after hip surgery, so learn to use it properly. A cane is used to assist one-legged activity by holding it in the OPPOSITE hand to the leg that is bearing the weight.

A cane is used for one-legged activity and is used as a second point of contact with the ground to support the operated leg.

- *When walking*, the operated leg requires support as soon as you put weight on it, so the cane is placed in the hand opposite to the operated leg and your weight on the cane and operated leg are applied simultaneously.
- *When you are standing or sitting*, place the cane in the hand on the operated side so that it acts as a second point of contact when you put weight on the non-operated leg.

Keeping up your spirits and motivation.

- The post-operative period is difficult, but it improves with time.
- Be optimistic, avoid dangerous positions, perform the exercises prescribed by your physiotherapist, and gradually increase your walking distance.

Talk to Someone Who Has Been There...Ortho Connect



When facing major surgery, the information and processes you're experiencing can be overwhelming. It's tough to know what you don't know – so it's difficult to prepare or figure out where to start. This booklet should help. So should talking to someone who has already been there. That's the premise behind Ortho Connect.

Ortho Connect is a free, phone-based peer support program that matches you or a caregiver with trained volunteers who have already undergone similar surgery. These volunteers provide a practical, real-world view of what to expect and how to prepare.

With their knowledge, experience, understanding, and encouragement, Ortho Connect volunteers can help you to feel more confident and informed while waiting for surgery or throughout rehabilitation. You become a more active participant in your own health care.

Ortho Connect is available to anyone who has been referred for any orthopaedic treatment, anywhere in Canada. Based on your treatment, location, and preferences, the Canadian Orthopaedic Foundation will arrange a match with a volunteer. Then, the Ortho Connect volunteer will call you and the help begins – typically within just two days.

To access Ortho Connect, call the Canadian Orthopaedic Foundation at 1-800-461-3639, or visit www.orthoconnect.org for accurate, up-to-date information about bone and joint health.



1.800.461.3639
www.whenithurtstomove.org
www.orthoconnect.org

This booklet is produced free of charge by the Canadian Orthopaedic Foundation, Canada's charity dedicated to bone and joint health.

Still Have Questions?

Access free, reliable, surgeon-approved resources and support programs to help with your return to mobility. Call today! We are here to support you every step of the way.



Bayer HealthCare

This booklet provides general, practical information only and should not replace consultation with, or care or instructions provided by, qualified health care professionals. The Canadian Orthopaedic Foundation does not endorse any product, treatment or therapy.

The Foundation's Medical & Scientific Review Committee has reviewed the content of this booklet for accuracy, reliability and helpfulness to the intended audience. While the Canadian Orthopaedic Foundation makes efforts to ensure the information in this booklet is accurate and reliable, it cannot guarantee that it is error-free or complete. Before making medical decisions, or if you have questions about your medical situation, speak to your surgeon.