

Recovery After Your Knee Replacement Surgery

Patient Name: _____

Please bring this booklet with you for all clinic appointments and your hospital stay with us.

	Date/Time
Your Surgery	
Your Pre-Operative Assessment and Education Session	
Your Physiotherapy Initial Assessment	
Your Follow-up Appointment with your Surgeon	



**Lakeridge
Health**

THE TOTAL KNEE REPLACEMENT PATIENT MANUAL

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INTRODUCTION

This booklet has been designed to help you understand and learn about your knee replacement as well as the rehabilitation following your surgery. This manual contains information on all aspects of your upcoming care, including pre-operative care, admission, surgery, post-operative care, rehabilitation and follow-up care once discharged home. It is important to remember that everyone is unique so your recovery may be somewhat different from what is listed here. For further information about total knee replacements, please visit:

<https://arthritis.ca/treatment/surgery/knee-replacement-surgery>

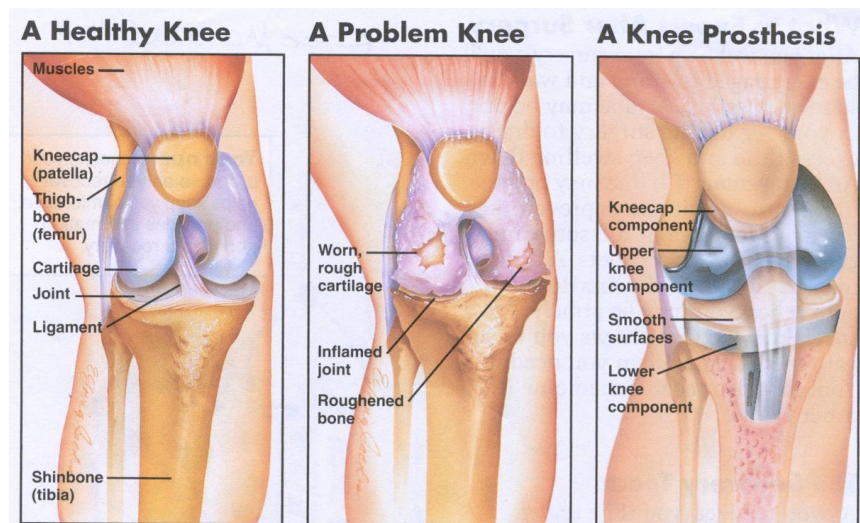
The Knee Joint

The knee joint is a hinge type joint, allowing the knee to bend and straighten. The end of the thigh bone (femur) meets the top of the shin bone (tibia). Both bone ends are normally covered with cartilage which permits smooth and painless motion.

About the Artificial Knee Joint (Called a Prosthesis)

Each prosthesis is made up of two parts:

1. The upper part of the replacement consists of a contoured metal cap that fits around the lower end of the thigh bone (femur).
2. The lower part of the replacement consists of a flat metal plate and stem that fits in the shin bone (tibia). A plastic insert fits on top of the metal plate.
3. The surface of the kneecap (patella) may or may not be lined with new plastic.



Causes for Knee Replacement:

There are many conditions that can result in degeneration of the knee. Some of the most common causes are:

- Osteoarthritis: this condition is referred to as “wear and tear arthritis.” Osteoarthritis can occur with no previous history of injury. The knee simply wears out. There may be a genetic tendency in some people that increases their chances of developing osteoarthritis.
- Abnormalities that are mechanical, or result from fractures involving the knee, can lead to degeneration many years after the injury.
- You have made the decision to undergo this elective surgery and have therefore met with an Orthopedic Surgeon.
- The **goals of total knee replacement surgery** are to relieve pain; improve joint mobility; and restore or improve your ability to safely perform functional activities like walking, standing, or stair climbing.
- It is important to note that surgery will have a short-term impact (e.g. increased pain, limited mobility etc.) on your life before the long-term benefits become apparent. Recovery times vary from person to person, depending on the procedure and the individual's general health. Full recovery can take up to 6-12 months, and your participation in your rehabilitation (e.g. physiotherapy) plays a large role in your full recovery.
- Your Surgeon has most likely informed you of the possible risks of this type of surgery including infection, blood clots, nerve damage, wear and implant failure, bone fracture, adverse reactions to materials, limited pain relief and range of motion, anesthetic complications etc. If you have any remaining questions regarding this procedure, please ask your Surgeon.

We ask that you read this manual in its entirety and bring it with you for your stay in the hospital and to all clinic visits related to your knee replacement.

PREPARING FOR SURGERY

- Please note that you may be discharged from the hospital 1-2 days after your surgery or even the same day as your surgery.
- It is important to consider what help you may need after you are discharged from the hospital (e.g. transportation, personal care). Community resources, such as respite care or home care, come at an additional cost and must be arranged prior to your surgery. For more information regarding respite care, call (905) 430-3308.
- It is important you follow any pre-operative instructions given by your Surgeon. For example, quit smoking, follow-up with other healthcare providers etc.
- Knowledge is power. Patients who are informed tend to have smoother recoveries and better outcomes. Spend some time learning about your surgery (e.g. speaking to friends or family members who have undergone similar surgery to learn what their recovery was like).
- Maintain or attain a healthy body weight as recommended by your Physician or Surgeon.
- Maintain or improve your fitness level. This may help your post-operative rehabilitation and recovery. Please start exercises 1-6 on pages 22 and 23 as soon as possible before your surgery. Do not start exercises 7-23 until instructed by your Physiotherapist.

SAFETY IN THE HOME

Preparing Your Home

Equipment You Will Need at Home:

- Walker
- Cane
- Other items, such as a raised toilet seat or tub/shower equipment, may also be recommended for you by your Therapists.



Additional Helpful Tips for Home Setup

If you have stairs at home, you will be taught by your Physiotherapist how to go up and down stairs before you return home. Many people are more comfortable living on the main level when they first go home. If possible, set up a temporary bedroom on the main floor. If you do not have a bathroom on the same level as your bed, a commode chair rental is useful.

Avoid low beds at home. If required, raise your bed height with blocks, an extra mattress or by renting an adjustable hospital bed. It is much easier getting on and off a firm mattress than a soft one. If your mattress is soft, place a board underneath it. Prepare a bedside table that holds everything you will need (e.g. clock, lamp, telephone, medication, water, books etc.).

You may wish to arrange help for household tasks, such as housekeeping, during your initial recovery phase, especially if you live alone.

Suggestions for Preparing Your Home

- Change furniture layout to allow for walker use.
- Move frequently used items to waist height.
- Prepare meals and freeze them.
- Purchase or rent equipment.
- Install grab bars and railings for staircases.
- Arrange rides/transportation.
- Place skid proof mats in your washroom.
- Remove scatter rugs and clutter.
- Ensure there is adequate lighting throughout your home to avoid tripping and falling. Consider using nightlights in dark areas, like hallways and stairwells.
- Wear supportive shoes inside your home.
- Use chairs with a hard seat, backrest & arms. Avoid chairs that recline, rock or roll.

WHAT TO BRING TO THE HOSPITAL

PLEASE ARRANGE FOR FAMILY/FRIENDS TO BRING THESE ITEMS TO YOU AFTER SURGERY:

- Your cane and current dressing aids you are comfortable using.
- A walker will be provided for you to use during your hospital stay. However, it is helpful to have someone bring your own walker on the day of discharge so that you can use it to transfer into your car.
- Loose, comfortable clothing.
- This manual which contains your exercise program.
- Flat, rubber soled shoes/slippers with support around the back of the ankle (allow for an increase in shoe size by 1 size to accommodate for swelling).
- Medication in original packaging and a list of what they are for.
- Personal care and hygiene items (e.g. deodorant, comb, shampoo, toothbrush, Kleenex, soap, extra pillow).
- If you wear dentures/glasses, please bring denture cup and glass case with you.



PLEASE NOTE: Leave valuables at home.

WHAT TO DO BEFORE COMING TO THE HOSPITAL FOR YOUR SURGERY

- Notify your Family Doctor of your operation date and expected discharge date so they will be prepared for your post-op visits (e.g. staple removal).
- Stop taking medications as directed by your Surgeon or the Nurse who reviewed your medications at the pre-operative assessment.

- If you are experiencing flu or cold like symptoms up to one week before surgery or if there is a change in your medical status, you should notify your Surgeon immediately by contacting their office.

THE DAY BEFORE SURGERY

- If you have not quit smoking, it is suggested that you do not smoke within 24 hours of your surgery.
- Do not drink alcohol for 24 hours prior to your surgery.
- **Please follow the guidelines regarding when to stop eating and drinking before surgery, as outlined at your pre-operative assessment.**
- Shower or bathe to reduce the risk of infection from bacteria on the skin. Do not apply creams or lotions.
- Do not shave over or around where the surgical incision will be.
- Remove all make-up, nail polish, and jewelry. If you have acrylic nails, you may leave these on, but the nail polish must be removed.

THE DAY OF SURGERY

- Only take the medications that your Surgeon, or the Nurse at the pre-operative assessment, has advised you to take.
- On arrival to the hospital, please go to admitting/registration desk at the time recommended by your Surgeon.
- A Nurse will call you to start to prepare you for your surgery.
- An intravenous line will be started and any medication that is needed prior to surgery will also be given to you at this time.
- The pre-determined anesthetic (e.g. general or spinal anesthetic) will be started and monitors will be attached to you in the operating room.
- Surgery is approximately 1 to 2 hours.

YOUR STAY IN ACUTE CARE

Day of Surgery – Post-Operative Day Zero

- **Early mobility is important for your recovery. You can expect this to start the day of your surgery unless specified by your Surgeon or healthcare team.**
- You will be expected to sit up in a chair for meals and ambulate to the bathroom.
- It is very important that you continue taking deep breaths and coughing about 5 times every hour.
- It is also very important to move your feet up and down (ankle pumps) about 10 times every hour to avoid blood clots.
- If at any time during your post-operative hospital stay you feel burning or discomfort in your heels or sharp calf pain, please inform your Nurse.
- Do NOT place a pillow underneath your knee. Your knee should remain straight when lying in bed.



Post-Operative Day One/Two

Independence is vital to your recovery and you are encouraged to do as much as possible for yourself. Most patients go home on post-operative day one.

- Continue with hourly deep breathing and ankle/foot exercises.
- You will be started on a blood thinner. This will continue daily even when you are at home. On the day of discharge, you will be given instructions and a prescription if needed.
- You will be taught how to care for your incision. You will notice you have metal staples or dissolvable stitches along your incision line. If you have staples, they will remain in place for 10-14 days.
- You will be getting dressed daily. Please bring comfortable clothing as well as any dressing equipment you may use (e.g. sock aid, reacher). Wide legged slacks or shorts are recommended.
- A Physiotherapist will start you on your exercises. They will check your ability to move your knee and review your knee exercises. Your Physiotherapist will also teach you how to walk with a walker and do stairs if you have stairs at home.
- Your Physiotherapist will tell you how much weight the Surgeon has deemed appropriate to put through your operated leg. In most cases, this will be as much as you are able to tolerate.
- You will be encouraged to wash at the sink and to eat your meals in a chair.
- Staff will assist you walking to and from the bathroom with the use of your walker until you are able to do so independently.
- Discharge plans will be finalized regarding follow-up physiotherapy.

EXPECTATIONS BEFORE GOING HOME

Discharge Goals:

Therapy Goals	Medical Goals
<ul style="list-style-type: none">○ Get in and out of bed by yourself○ Independently perform your exercises○ Independently walk short distances (e.g. to the bathroom) with a walker○ Be able to climb stairs if you have them at home○ Manage some of your own personal care (e.g. getting dressed)	<ul style="list-style-type: none">○ Bloodwork is stable○ Pain is well managed○ Incision is healing well○ Health status is at baseline (e.g. cardiovascular system)

Prior to leaving the hospital, it is important to:

- Understand your medications and their schedule.
- Know how to care for your incision.
- Have made an appointment with your Family Doctor to remove your staples. In some cases, your Surgeon will remove your staples. If this is the case an appointment date and time will be given to you.
- Have made arrangements for someone to assist you with grocery shopping, house cleaning, laundry, and transportation to/from follow-up appointments.
- Have made arrangements for transportation home.
- Have arrangements made for where you will be starting outpatient physiotherapy, and transportation to and from such appointments.

EXPECTATIONS ONCE YOU ARE HOME

- You are continuing your exercise program three times a day.
- You should gradually increase the distance you are able to walk with your gait aid.
- Consult with your Surgeon regarding when you may return to work or sport.
- No driving for 4-6 weeks, as directed by your Surgeon.
- You may resume sexual activity when you are comfortable (usually 6 weeks after surgery).

CARING FOR YOUR INCISION

It is important that you take proper care of your incision to avoid infection. Here are the things you need to know:

- **Only change your dressing as recommended by your Surgeon or Nurse.**
- Before touching your incision make sure you wash your hands with soap and water.
- Gently remove the old dressing and inspect it for odour and drainage (either clear or yellow/green). Report any yellow/green drainage and odour to your Surgeon or Family Doctor.
- Place the new dressing over the incision, making sure to cover it completely. Be careful not to touch the underside of the clean dressing.

Ask your Surgeon whether you can shower with your dressing. Some dressings are waterproof and others cannot get wet. Ask your Surgeon which type you have.

ACTIVITY MANAGEMENT

Bed Transfers

Positioning in Bed

It is recommended that you keep your knee straight when lying in bed. Do NOT place a pillow underneath your knee. You are allowed to place a pillow under your ankle.

How to Get In and Out of Bed:

1. Slide your legs to the edge of the bed and shift your buttocks across the bed, while remaining on your back.
2. Hook a cane or bed sheet around the arch of your foot to help assist your operated leg to the edge of the bed and then on to the floor. Use your other hand to push your body upright.
3. When moving, try to move your body as a whole.
4. When getting into bed, reverse the process.

Sitting and Standing

Sitting on a firm chair with armrests is best. If the chair is too low (seat is below the knee when standing), you may want to place a firm cushion on the seat to make it easier to stand up from.

To Sit in a Chair:

1. Using your walker, back up to the chair until you feel the back of your non-operated leg touching it.
2. Move your operated leg forward and reach back for the armrests with one hand and lower yourself slowly into the chair. Once seated, you may scoot to the back of the chair.

To Stand Up:

1. Slide to the edge of the chair and move your operated leg slightly forward.
2. Push up with either both hands on the chair or with one hand on the chair and the other hand on the walker. Put most of your weight through your non-operated leg as you stand. **Do not pull up on the walker to stand as it may tip.**
3. Grasp the walker with both hands, straighten your back and stand tall.

Incorrect Positioning



Correct Positioning



Toilet/Commode Use

This procedure is the same as getting in and out of a chair. Your Therapist may recommend bathroom equipment, such as a raised toilet seat (with or without arms), to make it easier to get on and off the toilet. If your toilet is on a different level in your home, a commode chair can be used to reduce the amount of stair climbing.

To use a commode, raised toilet seat, or toilet rails:

1. Using your walker, back up to the toilet until you feel it behind your legs. Reach back for the armrest or toilet seat as you slide your operated leg forward. Slowly lower yourself onto the toilet.
2. Reverse the process for getting up. With your operated leg forward, push yourself up with the armrests. Do not pull up on the walker, as it may tip.
3. Avoid twisting your knee. Stand and turn to face the toilet when flushing.

Using a Walker

To walk, place the walker forward first and take a short step with the operated leg. You should focus on using a heel toe pattern. Then, step an equal distance with the non-operated leg, placing weight through your hands on the walker as needed.

Ensure you place your walker down on all 4 legs. If you are using a walker with wheels you do not need to pick it up – simply slide it along. When you turn, be sure the walker turns with you. It is best to turn towards your non-operated leg. When turning, take small steps. Do not twist your knee.

You may progress to using crutches or a cane once you and your Physiotherapist feel you are ready. Your Physiotherapist will instruct you on the proper technique of walking with a cane or crutches. When walking with a cane, please remember that the cane is held on the non-operated side and moves ahead with the operated leg.



Correct



Incorrect



Incorrect

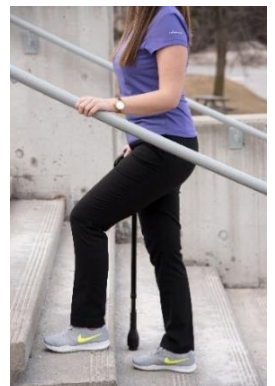


Incorrect

Stair Climbing

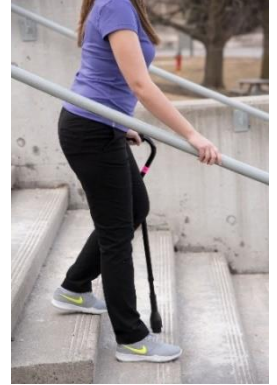
Ascending:

1. If there is a railing, grasp it and hold a cane in the opposite hand. If you have crutches, place both crutches under your opposite shoulder. If you do not have a railing, then you may substitute another crutch or cane for it.
2. Step up with the non-operated leg first, then bring the crutches/cane and the operated leg up together to the same step.



Descending:

1. Grasp the railing, if available. Place your crutches or cane in your other hand.
2. Place the crutches or cane on the first step down.
3. Step down with the operated leg and then follow with the non-operated leg to the same step.



You may wish to remember this sequence by the saying *“Up with the good, down with the bad.”* Your good leg leads up and your bad leg leads down.

Tub/Shower Transfers

- **Remember to ask your Surgeon whether you can get your dressing wet prior to showering.**
- Wet tubs and showers can be risky. Dry yourself off before getting out of the tub. Turn on the water after getting into the tub or shower and let the water drain before getting out.
- Put all your bathroom accessories, such as shampoo and soap, in an area that is easy to reach. You may want to plan to have someone assist you when you attempt to shower for the first time at home.

For your comfort, you may want to use a shower seat or tub transfer bench when bathing. Follow these instructions if you are using a tub transfer bench:

1. Using the walker, back up to the side of the tub until you feel the tub behind your legs. Ensure you are lined up with the bath seat or bench.
2. Slide your operated leg forward. Then, reach back for the seat and lower yourself down.
3. Lean back and lift your legs into the tub one at a time. Hook your cane or a towel around the arch of your foot to assist your operated leg into the tub, if needed.
4. Reverse the process to get out of the tub.

5. To stand up, put one hand on the back of the bench. Slide your operated foot forward. Put your other hand on the walker and stand up. Do not pull on the walker, as it may tip.

Getting Dressed

When getting dressed, sit in a chair or at the edge of your bed. DO NOT stand to step in or out of your pants or shoes. When putting underwear and pants on, pull your underwear and pants onto your operated leg first. When undressing, take your pants and underwear off of your operated side last. Your Therapist may recommend other dressing aids, such as a reacher or sock aid, to help you get dressed.

Car Transfers

To Get Into The *Front Passenger Seat*:

1. Make sure the seat is moved as far back as possible. If it is too low, consider placing a firm pillow in the seat to make it higher so that you don't have to bend your knee as much.
2. Back up to the car with your walker until you feel the car behind your legs.
3. Reach back and sit down on the side of the seat as you would any chair.
4. Scoot yourself backward onto the seat until your legs will clear the doorway. Then pivot and swing your legs into the car. Fasten your seatbelt.
5. Reverse the process to get out.

Note: To make sliding along the seat easier, you may want to try placing a plastic garbage bag on the seat before you sit. Additionally, you can place the hook of your cane around your foot on the operated leg to help guide your leg in or out of the car.



Traveling Long Distances

If traveling by car, plane or train for more than an hour, it is recommended that you frequently (approximately every half hour) get out of your seat and walk. This helps to avoid excessive stiffness and swelling in your legs and ankles.

Flying is not recommended for the first 3 months following your total joint replacement. If you have plans to travel, please speak with your Surgeon first.

YOUR REHABILITATION

You will need more physiotherapy to help you regain full function in your knee once you are discharged home. You will qualify for OHIP-funded outpatient physiotherapy after your joint replacement surgery. Referrals for your outpatient physiotherapy will be made before you leave the hospital.

You can expect to have your first physiotherapy appointment 5-7 days after being discharged from the hospital.

The options available for you to receive outpatient physiotherapy are:

- Referral to outpatient physiotherapy at Lakeridge Health. This may be group or individual sessions, as appropriate.
- Referral for outpatient physiotherapy at another hospital or a private clinic closer to your home. You are responsible for making your own appointments in this case. A Physician referral will be given to you upon hospital discharge. Take this referral with you to your first appointment.

At your first outpatient physiotherapy appointment, the Physiotherapist will assess your needs and a new exercise program will be created for you. These exercises will build on those you have become familiar with. They will help you to build the strength, range of motion, and function of your new knee. You will progress from using a walker to using a cane, and ideally to walking independently without a gait aid.

Please bring this manual that contains recommended exercises and your health card with you to your first outpatient physiotherapy appointment and wear loose fitting clothes.

SOME DO'S AND DON'TS

- Do change position regularly to avoid stiffness.
- Do ice your knee for 10-15 minutes at a time to prevent swelling and pain.
- Avoid kneeling.
- Don't jump.
- Avoid activities that involve pushing, pulling, or lifting heavy objects.
- Avoid sitting on low surfaces.
- Don't attempt too many stairs or hills.
- Avoid very vigorous sports like jogging, or racquet sports. For guidance on specific physical activities after knee surgery, ask your Physiotherapist or Surgeon.

WARNING SIGNS

If you notice any of the following, contact your Family Physician or Surgeon:

- Increased redness, swelling, odour or drainage from your incision.
- An unexplained fever (temperature >38C or 100F) or body chills that last more than a day.
- Severe knee pain that is not decreased by your pain medication and rest.
- Any numbness or tingling of your toes that is not relieved by elevating your legs.
- Sudden and severe increased swelling or pain in your thigh or calf.
- Either leg feels unusually cool to the touch.
- You suddenly have trouble walking.

Go to the Emergency Department if you experience trouble breathing or chest pain.

EXERCISING TIPS

- Gradually increase your exercises and work on them daily.
- Only attempt to do as many repetitions as you can without undue discomfort.
- It is a good idea to take pain medication about 30 minutes prior to physiotherapy as being at a comfortable pain level will increase your tolerance to exercise.
- You should be **icing your knee and elevating your leg** regularly, especially in the initial recovery phase to ease discomfort and swelling. Place an ice pack over your knee for no more than 10-15 at a time, repeating every 1-2 hours once the skin temperature returns to room temperature. It is best to wrap ice in a damp towel to prevent skin burns and irritation. Be sure to check regularly for skin irritation when icing as the sensation around your incision may be altered.
- Swelling may occur for about 6-12 months after your surgery. Using the RICE principle (Rest, Ice, Compression, Elevation) should alleviate swelling. To elevate your leg, keep your foot of your operated leg higher than your heart while you are lying down. You should elevate your legs at least twice a day for 45-60 minutes.

IMMEDIATE POST-OPERATIVE EXERCISES

1. **Deep Breathing Exercises** - Take slow deep breaths, in through the nose and out through the mouth.
2. **Ankle Pumping** - Move your feet up, down, and in circles.



3. **Buttock Contractions** - Tighten your buttocks muscles and hold for a count of 5 seconds.



Begin the above exercises immediately after your surgery. They will help to increase circulation in your legs and feet, which is important for preventing blood clots. They will also help to prevent complications with your breathing. **You should do them 10 times every hour when you are awake.**

Measuring your Knee Movement at Home

Estimating Knee Flexion (knee bend)

Sit in a chair with your back against the backrest and slide your heel under the seat as you bend your operated knee. Your ultimate goal is to have your foot under the chair.

Your Physiotherapist will monitor your range of motion. Ideally you want to have **a 90 degree bend in your knee by two weeks post-op, a 100 degree bend by three weeks post-op**, and progress from there.



Estimating Knee Extension (knee straightening)

Push down on the thigh of your operated leg to try and straighten your knee towards the bed while keeping your toes pointed toward the ceiling.



Your home exercise program is very important as it helps you to improve your range of motion and strengthen the muscles around the knee. **We recommend that you practice exercises 1-6 before your surgery so you are familiar with them.** Some of these exercises will be reviewed with you while you are in the hospital.

Continue to do these exercises **3 times a day** once you are discharged from the hospital. Before your first outpatient physiotherapy appointment you should be comfortable doing exercises 1-6.

Do NOT progress to exercises 7-24 until you are instructed to do so by your Physiotherapist.

POST-OPERATIVE EXERCISES

1. KNEE STRAIGHTENING

- Sit or lie with your operated leg straight out. Put a rolled up towel under the ankle of your operated leg.
- Push your knee into the bed so that it is straight.
- **For how long?** Hold for 5 seconds
- **How many?** 10-20 times



2. KNEE BEND (with a strap)

- Sit or lie with your operated leg straight out. Use a strap around your foot to help bring your operated knee into a bent position, keeping your heel on the bed.
- Hold the straps as close to your foot to allow for a stronger pull.
- **For how long?** Hold for 5 seconds
- **How many?** 10-20 times



3. SEATED KNEE BEND (with foot assistance)

- Sit upright in a chair and place your non-operated foot over the operated leg.
- Use your non-operated leg to slide the foot of your operated leg under the chair, which will bend your knee.
- Your ultimate goal is to have your foot under the chair.
- **For how long?** 5 seconds
- **How many?** 10-20 times



4. QUADS OVER ROLL

- Use a rolled towel or pillow under your operated knee.
- Engage your quadriceps muscle (in the front of your thigh) to lift your foot off the bed, straightening out your knee.
- You can use a strap or tie to assist if needed.
- **How many?** 10-20 times



5. ¼ SQUATS

- Hold onto a counter or rail.
- Place your feet shoulder width apart.
- Bend your knees and squat down as if you were sitting in a chair.
- Remember to push your bottom back.
- Your kneecaps should remain in line with your second toe.
- Do not allow your knees to go over your toes.
- **How many?** 10-20 times



6. HEEL TO BOTTOM

- Hold onto a counter or rail and place your feet shoulder width apart.
- Bend your operated knee to raise your heel up towards your bottom.
- Keep your knees parallel and do not let one knee come ahead of the other.
- **How many?** 10-20 times on each leg



Do not start the following exercises until instructed to do so by your Physiotherapist.

7. CALF STRETCH

- Hold onto a counter or rail and place your toes and the ball of your foot of your operated leg on a rolled towel, keeping your heel on the ground.
- Take a step forward with your non-operated leg. You should feel a stretch in the back of your operated leg.
- **For how long?** 10 seconds
- **How many?** 5 times



8. LUNGE ON STAIRS

- Put your operated leg on the second stair while holding onto a rail or the wall.
- Lean forward with your back straight to allow your operated knee to bend and hold this position.
- **For how long?** 5 seconds
- **How many?** 10 times



9. LYING KNEE BEND

- Lie on your back with your bottom near the wall. Put both of your feet on the wall, allowing your knees to bend.
- Let gravity pull your operated knee down into a bend, to the point where your knee feels tight.
- **For how long?** 30-60 seconds
- **How many?** 10 times



10. QUAD STRETCH/KNEE BEND (with strap)

- Lie on your stomach and extend the non-operated leg.
- Place a strap around the ankle of your operated leg.
- Pull the strap over your head to assist the bending of your operated knee.
- **For how long?** 5 seconds
- **How many?** 10-20 times



11. HEEL RAISES

- Hold onto a counter or rail and place your feet shoulder width apart.
- Rise up and down onto your toes.
- **How many?** 10-20 times



12. HIP ABDUCTION

- Hold onto a counter or rail and make a pigeon toe (turn your toes inward).
- Raise your leg out to the side (raising it up beside you).
- Make sure your upper body is not moving as you raise your leg and keep your body in an upright posture.
- **How many?** 10-20 times on each leg



13. SIT TO STAND

- Sit in a chair or on a bed. Check to see that you are able to stand up from the chair or bed without using your hands.
- Place your feet shoulder width apart and parallel.
- Tighten your thigh muscles to straighten your knees and stand up.
- Stand up and sit down trying not to use your hands for support.
- **How many?** 10-20 times



14. KNEE STRAIGHTENING ON STOMACH

- Lie on your stomach with your operated leg straight and have your feet slightly hanging off the bed.
- **For how long?** Stay in this position for as long as you can tolerate. Start with a minute and progress to a maximum of 10 minutes.



15. QUADS AT WALL

- Stand with your back against a wall and your feet shoulder width apart.
- Place your heels 1-3 inches away from the wall.
- Put a small ball or rolled up towel behind your operated leg (this will make your operated knee bend slightly).
- Use your muscles to straighten your operated knee by pushing the ball or towel into the wall.
- **How many?** 10-20 times



16. STRAIGHT LEG RAISE IN SITTING

- Sit in a chair with your bottom forward so your back is not touching the backrest.
- Straighten your operated leg and bring your toes towards you (activate your muscles on the front of your thigh).
- Keeping your operated leg straight, lift your heel off the ground 1 inch.
- **How many?** 10-20 times



17. STEP UP AND DOWN

- Hold onto the railing. Put your operated leg onto a step, then bring your other leg up.
- Step down with your non-operated leg first keeping your operated leg up on the step.
- Then place your operated leg down to the same step. Repeat.
- Remember to go slow and controlled.
- **How many?** 10-20 times



18. SIDEWAYS STEP UP AND DOWN

- Hold onto a railing. Put your operated leg sideways onto a step, then bring your other leg up.
- When stepping down, step down sideways with your non-operated leg. This will work your operated leg.
- Remember to go slow and controlled.
- **How many?** 10-20 times



19. STEP DOWN

- Hold onto a railing and keep your operated leg on the step while stepping down with your non-operated leg.
- Remember to go slow and controlled.
- **How many?** 10-20 times



20. SINGLE LEG STANCE

- Place your feet shoulder width apart. Start by placing your hands on a countertop.
- Try to pick up your non-operated leg so you are balancing on your operated leg.
- Challenge yourself by trying to lift your hands away from the countertop. Do this slowly as you focus on a still object in front of you.
- Remember to keep your hands close to the countertop in case you start to lose your balance.
- **For how long?** 1-3 minutes. Take breaks as needed.



21. MARCHING

- Hold onto a counter or rail, and one at a time, bring your knees up towards your hips as if you were marching.
- Keep your back in an upright posture.
- **For how long?** 1-3 minutes



22. MONSTER WALK

- Hold onto a counter or rail and stand with your knees slightly bent in a $\frac{1}{4}$ squat position.
- Keeping your knees bent, take sideways steps along the counter or rail.
- Repeat going the other direction.
- Avoid standing up after every step. Stay low while keeping your chest up facing forward.
- **For how long?** 1-3 minutes



23. WALL SQUAT

- Stand with your feet shoulder width apart and facing forward.
- Bring your feet 1-2 feet away from the wall and lean your back against the wall.
- Gently slide down the wall by bending your knees into a $\frac{1}{4}$ squat position.
- **For how long?** 10-30 seconds
- **How many times?** 3 times

