KNEE REPLACEMENT
POST-OP EXERCISE BOOK

YOU MUST BRING THIS BOOK WITH YOU TO ALL YOUR THERAPY APPOINTMENTS IN THE HOSPITAL AND TO ALL YOUR OUTPATIENT APPOINTMENTS

You have an appointment to see your surgeon/physiotherapist at the Surgical Assessment Center on:

Licence Plate number _______________________

If you need to change this appointment, please call 306-766-0401
This booklet will guide you in your physiotherapy journey from after your surgery to your first follow up appointment with your surgeon and outpatient physiotherapy sessions.

If you have any questions or concerns after discharge please call 766-0432

You will be receiving a phone call from the Surgical Assessment Center 48-72 hours after you are discharged from hospital to check on your recovery.
As part of your recovery, you are expected to complete your prescribed exercises twice a day, practice walking and apply ice as needed to your surgical area. Use this chart to keep track of your activity.

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<th>Morning Exercises</th>
<th>Ice / Elevation</th>
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<th>Ice / Elevation</th>
<th>Walking As Tolerated</th>
<th>Average Pain Today 0-10</th>
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**KNEE ROM ON DISCHARGE** ________________

(To be filled out by your physiotherapist in hospital)
Immediate Post Op Exercises

Circulation Exercises
- Pump your feet up and down.
- Do this 10 times every hour that you are awake while in hospital.

Ankle circles
- Do ankle exercises in each direction.
- Do this 10 times every hour that you are awake while in hospital.
Knee Squeezes

• With your legs straight out in front of you, squeeze the muscles on the front of your thighs and buttock muscles.

• Hold for 3 seconds. Relax. Repeat 10 times, 3-4 times per day.

Breathing Exercises

• Sit or lie down.

• Inhale deeply through your nose.

• Without exhaling, take 3 small “sniffs” to fill your lungs.

• Hold 2 to 5 seconds, then exhale.

• Do this 10 times every hour that you are awake while in hospital.
Understanding Your Pain

There are several things that contribute to pain and management. Up to now, you have been experiencing “arthritic pain”, which is often described as a dull aching pain. This pain should cease with surgery. Post operatively, you will be experiencing pain for a different reason – this is “surgical pain”. This will improve with time.

How to Reduce Pain and Swelling

Ice and Heat

• Apply ice for 10-15 minutes to the operated knee, especially after exercise. You can use ice as needed every 1-2 hours.

• Do not apply heat to your incision area. Talk to your physiotherapist before using any heat.

Pain Medication

• Pain medication should be taken as prescribed in hospital.

• It is important that your pain is controlled so that you can complete your 2 exercise sessions every day.

• Take your pain medication 30-45 minutes before your exercise session.
Swelling Control

• You can help control/reduce the swelling in your knee by elevating the leg above the level of your heart, for 20 minutes, 2-3 times per day.

• Elevate your entire leg by placing pillows underneath the entire operated leg, not just under the knee.
WALKING

Soon after surgery you will begin to walk short distances in your room. It is important to know your ‘weight bearing status’ when you begin to walk. This means how much pressure you can put on your operated leg.

YOU MUST CONTINUE USING YOUR WALKER OR CRUTCHES FOR SIX WEEKS AFTER SURGERY

Your surgeon or physiotherapist will instruct you when to start using a cane.

Weight Bearing As Tolerated:

Stand up straight as you can. You are allowed to put as much weight as you feel comfortable with on your operated leg.

Partial Weight Bearing:

You are allowed to put a maximum of 50% of your body weight through the operated leg.

How much should I be standing/walking?

Start with walking short distances in the hospital. Once discharged, gradually increase your walking in your house, within your tolerance. Prolonged standing can also increase your pain. An increase in knee pain and swelling, or an increase in night pain may indicate you have been doing too much.
Sit to Stand

When rising from a seated position you must place the foot of your operated leg ahead of the other foot. Put most of the weight through your arms and non-operated leg as you push up into a standing position.

Walking with your walker:


Keep your head up. Advance the walker about an arm’s length away. Step halfway into the walker with your operated leg, followed by your non-operated leg. Stand up tall and straight. Wear good supportive footwear with non-slip soles whenever possible.
STAIRS

Going Up

1. Hold the handrail with one hand and a cane or crutch in the other.

2. Step your non-operated leg up first. Then bring your operated leg and the cane or crutch up onto the step.

Going Down

1. Hold the handrail with one hand and a cane or crutch in the other.

2. Step down with your operated leg, along with your cane or crutch. Then step down with your non-operated leg.
My Knee is Getting More Stiff and Sore! What do I do??

****** If you experience the following once discharged home, see your family doctor or walk-in clinic ASAP******

- Increasing redness and/or increased temperature around your knee
- Increased incision drainage
- Generally feeling unwell

Use the diagrams on the following pages to help track how much your knee is bending and straightening. If you are experiencing an increase in knee stiffness and no increase in range of motion are you doing the following:

- **Doing enough exercises?** If your knee is becoming stiffer you should increase the frequency of exercises you are doing. It is necessary to hold the stretch for 20-30 seconds at the end of your range of motion. It is normal to have pain while doing the exercises.

- **Taking your pain medication as prescribed in the hospital?**

- **Icing your knee frequently?** You should ice your knee for 10-15 minutes, especially after the exercises. You can ice every 1-2 hours.

- **Elevating your leg above the heart level?** Ensure you are laying down with your entire operated leg elevated for 20 minutes, 2-3 times per day.

- **Doing too much other activity?** Often a sudden increase in activity is the reason for an increase in knee swelling and stiffness. Take more rest breaks.

- **Staying in one position?** Be sure to change positions regularly as staying in one position for too long can increase your stiffness.
Estimate your Knee Bend

Sitting in a chair with your body weight evenly distributed on both buttocks and your back against the chair, bend your operated knee by sliding your heel under the seat. Use the diagram below to estimate how much your knee is bending. Your goal is to be at least position 3 or further by two weeks after your surgery.

If you are having difficulty achieving position 2, consider doing more of your knee bending exercises on pages 14 and 15.
Estimate your Knee Straightening

Lying on your back, attempt to straighten your knee as much as possible.

Use the diagrams below to estimate how straight your knee is.

Your goal is to achieve position ‘B’ in 4-6 weeks after your surgery.

If you are having difficulty achieving position B, consider doing more of your knee straightening exercise on page 15 and the knee stretch on page 16.
Post Op Knee Exercises

You will begin these exercises while in hospital and will continue to do them at home once discharged. Do only the checked exercises

- **Seated Knee Straightening/Bending**

1. Sit in a chair or on your bed with good posture.

2. Pull the toes up and straighten your knee.

3. Hold for a count of five then slowly lower your foot and bend your knee as far back as you can.

4. Alternate with the other leg.

5. Start with 10 repetitions. Gradually progress to 30 repetitions on each leg, 2 times per day.

- **Knee Squeezes**

1. Lie on your back with your legs straight. You can place a small roll under your knees.

2. Pull your toes up, push the backs of your knees down tightening your thigh muscles.

   Gently squeeze your buttock muscles as well.

3. Hold for a count of 5, then relax.

4. Start with 10 repetitions. Gradually progress to 30 repetitions, 2 times per day.
Knee Bending

1. Lie on your back.
2. Keep your toes pointed towards the ceiling as you slide the heel of your operated leg towards your buttocks.
3. Hold for five seconds then slowly slide your foot back to the starting position.
4. You may use a strap around your foot to help your knee bend further.
5. Alternate with the other leg.
6. Start with 10 repetitions. Gradually progress to 30 repetitions on each leg, 2 times per day.

Knee Straightening

1. Lie on your back with a roll under your knees. The roll should be about 6-8 inches in diameter – a coffee can works well.
2. Pull your toes up and lift your heel off the bed, straightening your operated knee.
   Keep the back of your knee on the roll.
3. Hold for a count of 5, then slowly lower the foot.
4. Alternate with the other leg.
5. Start with 10 repetitions. Gradually progress to 30 repetitions, 2 times per day.
**Straight Leg Raise**

1. Lie on your back with your operated leg straight and your other knee bent.
2. Pull your toes up, tighten your thigh muscle and lift the operated leg off the bed, keeping the leg straight. Lift the leg 4-6 inches off the bed.
3. Hold for a count of 5, then slowly lower the leg.
4. Start with 10 repetitions. Gradually progress to 30 repetitions, 2 times per day.

**Knee Stretch**

1. Lie on your back with a roll under your ankles. The roll should be big enough so that the back of your calf does not touch the bed.
2. Keep your knee and foot pointed towards the ceiling.
3. Let the back of your knee relax, helping to straighten the knee.
4. Hold this position for 5 minutes. Do this twice a day.
DO NOT

progress to the following exercises

until directed by your physiotherapist
Standing Exercises

- **Squat**
  1. Stand tall with good posture, feet shoulder width apart
  2. Using chair or counter for balance, initiate squat by bending at the hip
  3. Squat as low as is comfortable for you
  4. Do not let your knees come over your toes – stick your hips back as if you were sitting in a chair.
  5. Hold the squat position for a count of 5 then return to standing.
  6. Do ____ sets of ________ repetitions.

- **Standing Knee Flexion**
  1. Use chair or counter for support
  2. Bend your operated knee, bringing your heel towards your buttocks
  3. Keep your trunk upright, do not bend forward
  4. Hold knee bend position for a count of 5
  5. Do _______ sets of _________ repetitions.

  - Progress exercise by using an ankle weight or resistance band.
Standing Hip Abduction

1. Use a chair or counter for support.

2. Keeping your toes pointed forward, lift one leg out to the side.


4. Hold the leg lift for a count of five, then return to the starting position.

5. Do _____ sets of _____repetitions on each leg.

   Progression: Add a resistance band or ankle weight

Balance

1. Use a chair or counter for support

2. Lift one leg off the floor, maintaining your balance.

3. Try to hold the position for 5 seconds to start, work up to holding the position for 30 seconds.

4. Do ______ repetitions on each leg.
Calf Raise

1. Use a chair or counter for support as needed.
2. Rise up onto your tip toes, lifting your heels off the ground.
3. Stay on your toes for a count of 5, then lower the heels.
4. Do _____ sets of _____ repetitions.

Calf Stretch

1. Stand in front of a wall with your strong leg forward and your operated leg back.
2. Lean forwards bending the front knee. Keep the operated knee as straight as you can with the heel on the ground.
3. You should feel a stretch in the back of the operated leg.
4. Hold for ____ seconds. Repeat _____ times.
- **Step Up**

1. Stand in front of a step.
2. Place the non-operated leg on the step, then bring the operated leg onto the step.
3. Step backwards off the step, bringing the operated leg down first, followed by the non-operated leg.
4. Do _____ sets of ______ repetitions.
   - Progression: Bring the operated leg up first, followed by the non-operated leg.
     - Step backwards bringing the non-operated leg down first.

- **Lateral Step Up**

1. Stand sideways next to a step with the operated leg on the bottom step.
2. Step up by straightening the knee of the operated leg.
3. Slowly lower the non-operated leg back to the floor by bending the operated knee.
4. Do _______ sets of ______ repetitions.
   - Progression: Place a resistance band around the knee of the operated leg.
Chair Squat

1. Stand in front of a chair
2. Lower into a squat by bending at the hip. Do not let your knees come over your toes.
3. Lower down until your buttocks just touch the chair then return to the starting position.
4. Do ______sets of _______ repetitions

Seated Exercises

Seated Foot Slides

1. Sit in a chair with good posture
2. Slide the foot of the operated leg back underneath the chair, bending the knee.
3. Do not let your hip come off the seat of the chair.
4. You may place a towel or garbage bag under your foot to help it slide easier.
5. Do ________ sets of ________ repetitions
**Seated Foot Slides with Overpressure**

1. Sit in a chair with good posture.
2. Slide the foot of the operated leg back underneath the chair, bending the knee.
3. Apply overpressure to the movement by placing the foot of the non-operated leg over the ankle of the operated leg.
4. Hold for a count of 10 then return to the starting position.
5. Do ______ sets of ______ repetitions

**Resisted Knee Flexion**

1. Sit in a chair with good posture.
2. Attach a resistance band to the ankle of your operated leg and to something solid in front of you, such as a table leg.
3. Starting with the knee of the operated leg straight, bend your knee pulling your foot underneath the chair.
4. Hold for a count of 5, then return to the starting position.
5. Do ______ sets of ______ repetitions
Resisted Seated Knee Extension

1. Sit in a chair with good posture.

2. Attach a resistance band to the ankle of your operated leg and to the leg of the chair. You can also use an ankle weight.

3. Slowly straighten the knee. Hold for a count of 5 then return to the starting position.

4. Do _________ sets of ________ repetitions.

Seated Hamstring Stretch

1. Sit on the edge of a chair with good posture.

2. Put your operated leg out in front of you, keeping the knee as straight as possible.

3. Lean forward from the hips, keeping your chest up until you feel a stretch in the back of the operated leg.

4. Hold for ______ seconds. Repeat __________ times.
BED EXERCISES

Prone Knee Bend
1. Lie on your stomach. You can place a folded towel under your operated knee for comfort.
2. Bend the knee of the operated leg, bringing your heel towards your buttocks.
3. Hold for a count of 5 then return to the starting position.
4. You may also use the non-operated leg to apply overpressure to increase the knee bending.
5. Do _____sets of ________repetitions

Prone Knee Straightening
1. Lie on your stomach with your feet hanging over the edge of the bed.
2. Place a folded towel under your operated knee.
3. Put a weight on your ankle, or use your other foot to put downwards pressure on the ankle of the operated leg.
4. Hold for __________ minutes. Repeat __________ times.
 Bridge

1. Lay on your back with your knees bent and your arms at your sides.

2. Tighten your abdominal muscles then lift your hips off the floor by squeezing your thigh and buttock muscles.

3. Hold the bridge for a count of 5 then slowly lower your hips.

4. Do ____ sets of _____ repetitions.

 Sidelying Hip Abduction

1. Lay on your non-operated side with the bottom knee bent for support.

2. Keeping your toes pointed forward, lift the top leg.

3. Keep your pelvis rolled slightly forward – do not let your hips roll back.

4. Hold the leg lift for a count of 5, then slowly lower the top leg to the starting position.

5. Do _____ sets of ________ repetition.
Stationary Cycling

1. You can use an upright or recumbent bike

2. The seat position is very important: adjust the seat position so that there is just a slight bend in your knee when the pedal is furthest away from you.

3. To work on range of motion in the knee – do not put any tension/resistance on the pedals. Focus on straightening and bending the knee as you pedal. If you can’t make a full pedal revolution at first, go as far as you can in one direction then reverse. Aim for 5 minutes

4. To work on leg strength – add resistance to the pedals. You should still be able to comfortably pedal. Start with 5 minutes and gradually work up to 20 minutes of cycling.
Resuming an Active Lifestyle

Activities allowed during the first 6 weeks after surgery:

• Walking with your walking aid – gradually increase your distance
• Swimming – your incision must be well-healed before you swim to avoid infection. *No whip kick*
• Stationary Cycling – do not start cycling until you have talked to your physiotherapist

Activities allowed at 6-8 weeks after surgery:

• Golfing – start at the driving range
• Gardening – raised garden beds and long handled tools recommended to avoid excessive knee bending
• Kneeling – use a pillow or knee pads for comfort
• Driving – discuss with your surgeon when you can begin driving

Activities allowed at approximately 12 weeks after surgery

• Cycling on a regular bike – raise the seat to prevent excessive knee bending
• Gentle dancing
• Low impact aerobics

Discuss higher impact/risk activities, such as skiing, skating and tennis, with your surgeon.

High impact activities such as jogging, basketball or racquetball should never be done following your surgery, unless specifically approved by your surgeon.

General Fitness

You can return to the activities you used to do before your surgery, following the guidelines above.

Remember to start slowly as you will have been less active since your surgery. Start with a few minutes of activity and gradually progress.

Low impact activities are best, such as swimming, biking and walking. Talk to your physiotherapist about any specific questions you have.