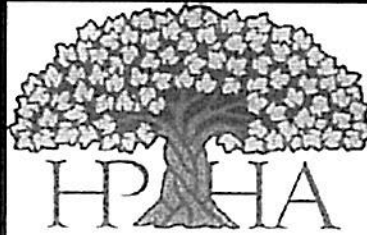


Huron Perth Healthcare Alliance

# Total Knee Replacement Handbook



HURON PERTH  
HEALTHCARE  
ALLIANCE

Bring your handbook with you  
the day of surgery

Revised July 2014

## TABLE OF CONTENTS

### **PHYSIOTHERAPY INFORMATION**

Making Changes in Your Home Before Surgery .....	2
Equipment you Will Require at Home.....	3
Taking Care of Your New Knee (Precautions).....	4
How To Move Around Safely with Your Knee .....	5
Knee Exercises .....	7

### **NURSING INFORMATION**

Pre-Operative Instructions .....	12
Patient Care Plan.....	13
Exercises .....	15
Discharge Instruction.....	16
Preventing Deep Vein Thrombosis (Blood Clots) .....	18

## Making Changes in Your Home Before Surgery

Remember that making a few changes in your home prior to your surgery can make it possible for you to do many of your usual home activities when you return home. Your Therapist will teach you how to make changes in your home to keep you safe.

**Some changes you may need to make in your Home:**

- ❖ Install a railing along the stairs
- ❖ Remove loose rugs
- ❖ Add cushions to low chairs
- ❖ Move electrical cords or anything that may cause you to trip
- ❖ Put things you use often within safe reach. Safe reach is between your shoulder and your waist height.
- ❖ Use arm chairs
- ❖ Use raised toilet seat

**Changes that make it easier to Cook:**

- ❖ Washing dishes may be easier if you sit on a high stool or chair
- ❖ Move things in your kitchen so they are between your shoulder and your waist height
- ❖ Do not use the bottom shelf or drawer in your refrigerator
- ❖ Move the toaster oven or microwave onto the counter so it will be easier to cook

**You will need help from family or friends to:**

- ❖ Lift or carry heavy things
- ❖ Do work that requires bending or kneeling – cleaning floors, bath tub

## Equipment You Will Require at Home

- Walker
- Cane(s)
- High firm chair with arm rests
- Raised toilet seat
- Ice pack

## What to Expect After Surgery With Physiotherapy

### Surgery day:

- Commence deep breathing, foot and ankle exercises and static quads in bed (exercises 1-2)
- If appropriate, you may be assisted to sit up at the side of the bed or get up to a chair, with nursing/physiotherapy

### Day 1:

- Before lunch you will walk with Physiotherapy
- After lunch you will walk back to bed from the chair with Physiotherapy
- Commence foot and ankle exercises in bed, static quads and knee exercises

### Day 2/3:

- You will walk twice a day with Physiotherapy (once before lunch and once after lunch)
- Commence knee range of motion exercises
- You will sit with your knee bent and foot on floor for a short period
- You will practice the stairs, review exercises and ambulation prior to discharge

## Weight Bearing

Weight bearing is the amount of weight you are allowed to put on your operative leg.

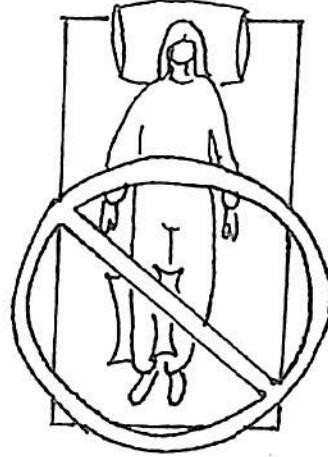
WBAT = Weight Bear As Tolerated. You can put as much weight as you can tolerate on your operative leg.

## Use of Ice

Ice is an excellent pain modality and reduces pain and swelling. Use before and/or after exercises. Can be used above or below the knee. Use for 20 minutes at a time.

## Taking Care of Your New Knee (Knee Precautions)

- ❖ While lying down DO NOT put a pillow under your knee for support



- ❖ Kneeling on your operative knee is restricted

- ❖ Use a high armchair to sit on. A commode or raised toilet seat may be helpful in the bathroom.



## How to Move Around Safely with Your Knee

### Standing Up

Follow these steps to stand up:

- ❖ Move to edge of the chair or bed
- ❖ Bend your good leg under you to hold your body weight
- ❖ Slide your Operated foot forward
- ❖ Push down on the chair arms or bed with your hands to stand up. Put most of your weight on your good leg
- ❖ Once you have your balance, use your walker



### Sitting Down

Follow these steps to sit down:

- ❖ Back up to the edge of the chair or bed until you feel it against your good leg
- ❖ Feel the armrest of your chair with your hand
- ❖ Slide your operated leg forward
- ❖ Hold the armrests or bed with your hands
- ❖ Lower yourself to a sitting position slowly and gently

## Walking

The first few times you get out of bed you may feel weak or dizzy. Make sure a nurse or therapist is with you. Tell them if you feel weak or dizzy. Your nurse or therapist will tell when it is safe for you to walk by yourself.

When you are walking:

- ❖ Move your walker ahead first
- ❖ Next take a step with your operated leg
- ❖ Then take a step with your good leg

Take short walks as often as you can, using your walker. Walking helps prevent joint stiffness and is good for your general health. Try to go longer distances when you are able. It is recommended that you do not pivot on your operative leg.

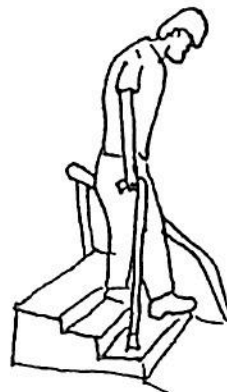
## Going up and Down Stairs

- ❖ Use a hand railing, when there is one, and your cane
- ❖ Go upstairs with your good leg first
- ❖ Go downstairs by putting your cane down on the stair and then your operative leg.

UP



Down



## Knee Exercises

A Physiotherapist will show you the exercises you need to do.

These exercises will help you:

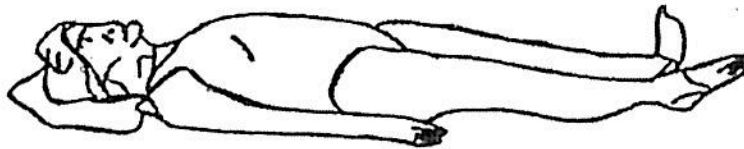
- ❖ Strengthen the muscles in your legs
- ❖ Move your new hip and prevent joint stiffness
- ❖ Improve blood supply to your legs

You are strongly urged to attend the pre-operative clinic before surgery. This will give you a chance to learn or practice these exercises before your surgery.

Do these exercises when you are lying down:

These exercises are to be done 3 times a day to improve strength and flexibility. Your exercises will be progressed once you are home by your Physiotherapist. Exercises 1-2 will be started day 1. Exercises 3-6 will be started day 2-3 at Physiotherapists discretion.

- 
1. Bend your ankles up and down, one foot at a time



Repeat 10 times. Do this many times throughout the day

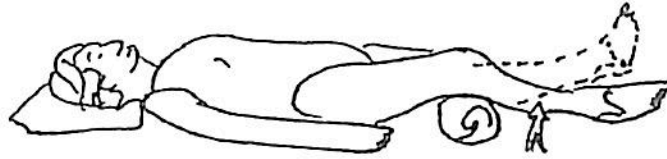
2. Slowly tighten muscles on thigh of straight leg while counting to 10



Repeat 10 times. Do this 3 times a day



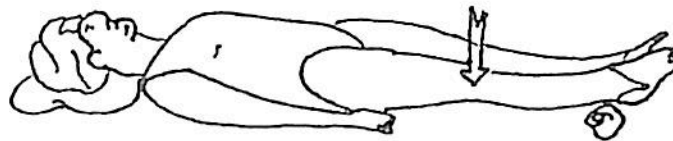
3. Place a large can or rolled towel under the leg. Straighten knee and leg. Hold for 5 seconds.



Repeat 10 times. Do the 3 times a day

---

4. Place a small roll under ankle. Push down gently to straighten the knee.



Repeat 10 times. Do this 3 times a day

---

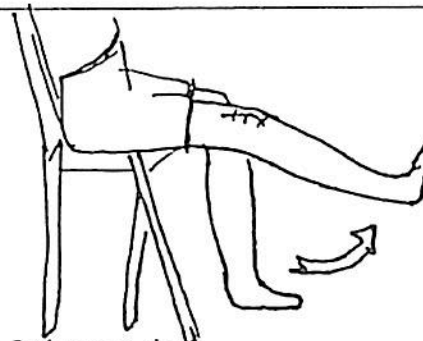
5. In sitting with feet on ground, place a towel under your operative foot. Slide leg back under your chair as far as you can. You may use other leg to assist with bending.



Repeat 10 times. Do this 3 times a day

---

6. In sitting with feet on ground, press the back of your thigh into the chair while lifting your foot off the floor to straighten your leg, hold for 5 seconds.



Repeat 10 times. Do this 3 times a day

---



# **Information From Your Nurses**

- Pre-Operative Instructions
- Patient Care Plan
- Breathing Exercises
- Pain Control
- Discharge Instructions

## Total Knee Replacement

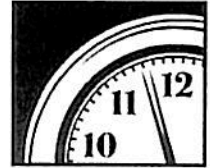
## PRE-OPERATIVE INSTRUCTIONS

“Admit Same Day” is a term used to refer to a patient who is admitted to the hospital on the day of his/her operation. The patient usually stays in the hospital at least overnight. If you are being admitted to the hospital on an “Admit Same Day” basis, you must observe the following rules for your safety:

### Food & Beverage Intake:

Failure to follow these instructions regarding food and beverage intake pre-operatively could result in the postponement of your surgery to a later date or put you at risk for developing life-threatening complications:

- Eat as usual, up to midnight the day before your operation
- **After midnight**, nothing to eat or drink, including water (this also includes chewing gum)



### Medication:

Contact your physician for specific medication instructions. Some medications may need to be stopped or modified up to two (2) weeks before surgery.

### Smoking:

- There should be no smoking for eight (8) hours before your operation. Smoking affects your heart, lungs and blood
- You are advised to reduce and preferably stop smoking for two (2) weeks before your operation
- Smoking is not permitted anywhere on hospital property



### General Reminders:

- Notify your surgeon before surgery if you develop a cold or infection
- You must bring your health card
- Leave all valuables, including money, credit cards, rings, earrings, necklaces, etc. at home
- Remove all nail polish and make-up before coming to the hospital
- Shower or bathe the evening before or morning of your surgery
- Brush your teeth and freshen your mouth, but do not swallow
- Do not wear perfumes, colognes or aftershave on the day of surgery
- Contact lenses must not be worn in the Operating Room. Bring a container to put them in.

**TOTAL KNEE REPLACEMENT - PATIENT CARE PLAN**

	<b>Pre-Admit Clinic</b>	<b>Day Of Surgery</b>
<b>Tests and Treatments</b>	<ul style="list-style-type: none"> <li>You will have an appointment with the Pre-Admission Clinic nurse</li> <li>You will have blood drawn for testing</li> <li>You will inform the nurse if you have donated your own blood (autologous)</li> <li>You may have an ECG (electrocardiogram) which is a test of your heart pattern</li> </ul>	<p><b>Before the Operation:</b></p> <ul style="list-style-type: none"> <li>Arrive at least 1½ hours prior to your surgery time</li> <li>Register at Surgical Services (second floor)</li> <li>An intravenous will be started</li> </ul> <p><b>After the Operation:</b></p> <ul style="list-style-type: none"> <li>You will wake up in the Recovery Room</li> <li>You will have a catheter (tube in your bladder)</li> </ul>
<b>Medication</b>	<ul style="list-style-type: none"> <li>Be sure to discuss any allergies you have</li> <li>Bring all of your medications with you</li> <li>You will be told which medications you should stop prior to surgery</li> </ul>	<p><b>After the Operation:</b></p> <ul style="list-style-type: none"> <li>You may receive extra oxygen by a tube in your nose</li> <li>Please let the nurse know if you are having pain so that analgesics can be administered</li> </ul>
<b>Teaching</b>	<ul style="list-style-type: none"> <li>You will attend a group class to prepare you for your surgery</li> <li>During this class pain management, equipment and wound care will be reviewed to help you manage after your knee surgery.</li> </ul>	<ul style="list-style-type: none"> <li>Each day you will be reminded to: take deep breaths and cough; move your ankles and toes; ask for medication for nausea and pain</li> </ul>
<b>Activity</b>	<ul style="list-style-type: none"> <li>Normal daily activity</li> </ul>	<ul style="list-style-type: none"> <li>You will get up on the day of surgery</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>You should obtain the suggested equipment to have in your house prior to surgery</li> <li>You may need to prepare your home for after surgery</li> <li>Feel free to ask any questions, concerns</li> </ul>	<ul style="list-style-type: none"> <li>You will be offered clear fluids after your operation</li> </ul>



## TOTAL KNEE REPLACEMENT - PATIENT CARE PLAN

	Day 1 - After Surgery	Day 2 - After Surgery Discharge Day
Tests and Treatments	<ul style="list-style-type: none"> <li>You may have blood drawn for testing</li> <li>Tensor is removed</li> <li>You may need a blood transfusion</li> <li>If you have a drain, it will be removed</li> <li>Catheter will be removed</li> </ul>	<ul style="list-style-type: none"> <li>Your intravenous will be taken out</li> <li>You will have your dressing changed</li> <li>The nurse will review your medications you will take at home and will return your own medication</li> <li><b>Target Discharge Time = 11:00 am</b></li> </ul>
Medication	<ul style="list-style-type: none"> <li>You will be given pain medication by mouth. Please let the nurse know if medication is not effective.</li> </ul>	<ul style="list-style-type: none"> <li>Ask for your pain medication regularly so you are comfortable</li> <li>You will be given a prescription for pain medication at home.</li> <li>You may need medication to help you have a bowel movement if you are constipated (pain pills are constipating).</li> </ul>
Teaching	<ul style="list-style-type: none"> <li>A Physiotherapist will review your exercises with you and will review precautions so you do not hurt your knee</li> </ul>	<ul style="list-style-type: none"> <li>A Physiotherapist from CCAC will visit you at home within 2 days of your discharge</li> </ul>
Activity	<ul style="list-style-type: none"> <li>You will start to get up and sit in a chair</li> <li>A Physiotherapist will help you to walk using a walker</li> <li>You may go to the bathroom on a commode chair or walk with your walker</li> </ul>	<ul style="list-style-type: none"> <li>You will walk in the hall with a walker</li> <li>You will practice your exercises on your own</li> <li>You will be taught how to do stairs</li> <li>Continue your exercises and increase your walking at home</li> </ul>
Other	<ul style="list-style-type: none"> <li>You will gradually have fluids to a regular diet</li> </ul>	<ul style="list-style-type: none"> <li>You will be given an appointment time for a follow-up appointment with your surgeon</li> <li>You will need to arrange for transportation to get you home</li> </ul>

## Exercises

In the first few days following surgery, it is essential for you to perform a few simple exercises and activities. You are strongly encouraged to attend the pre-operative clinic before surgery. This will give you a chance to learn or practice the following exercises before your surgery. These exercises will assist in making you more comfortable and help prevent any post-operative complications.

### Breathing Exercises:

*Why:* To keep your lungs expanding fully and to help mucus from your lungs to your throat where it can be coughed up. This mucus can make breathing difficult if not removed.

*How:* Breathe in deeply through your nose. Think about taking air down around your waist. Hold for a count of three (3), then exhale through an open mouth.

*When:* Take ten (10) deep breaths, every waking hour for a few days after surgery.

### Coughing:

*Why:* This is the only effective way to clear the mucus you may have in your lungs following surgery. Hawking and clearing your throat will not help.

*How:* Lying on your back or side or sitting, breathe in and cough deeply.

# DISCHARGE INSTRUCTIONS

You may notice that you tire easily after your return home. Plan to balance your activity and rest. Swelling of the operative joint is expected in the first few weeks following surgery; however, excessive swelling or pain should be reported to your surgeon.

## Weight Bearing:

Weight bearing is the amount of weight you are allowed to put on your operative leg. WBAT stands for Weight Bearing As Tolerated. Your physiotherapist will tell you how much weight to put on your operative leg as ordered by your orthopedic surgeon. Continue as instructed until seen by your surgeon.

## Use of Ice:

- Ice is an excellent pain modality and reduces pain and swelling
- Use before and/or after exercises
- Can be used above and below the knee
- Use for 20 minutes at a time

## Knee Precautions:

- While lying, **DO NOT** put a pillow under your knee for support
- Kneeling on your operative knee is restricted
- Use a high armchair to sit on. A commode or raised toilet seat may be helpful in the bathroom.

## Care of the Incision:

- Your staples to be removed 10-14 days post op by family physician. Ensure that follow-up instructions have been given for their removal. No bath or shower until staples are out
- Your incision should remain covered with a dressing until your staples are removed. If you need to change your dressing please purchase gauze pads, a bottle of normal saline and some bondage tape.
- Resume showering when the staples have been removed

## Diet:

To avoid constipation, eat fruit, vegetables and bran products and drink plenty of fluids—unless you are on a special diet.

## NOTIFY YOUR PHYSICIAN IF YOU EXPERIENCE ANY OF THE FOLLOWING:

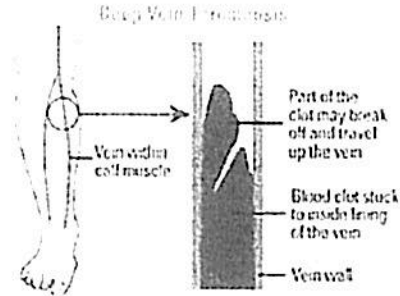
- Fever and/or chills
- Hard, reddened or unusually painful areas along, or near incision
- Any drainage or bleeding from incision
- Calf or chest pain
- Excessive joint pain and/or swelling



## PREVENTING DEEP VEIN THROMBOSIS

### What is Deep Vein Thrombosis?

Deep vein thrombosis (DVT) is a blood clot that forms in a deep vein, often in the calf or thigh. The clot can partially or completely block blood flow and damage blood vessels. If a blood clot breaks free, it can travel to the lungs and cause pulmonary embolus (PE), which can be serious.



### DVT Risk Factors

The risk of developing DVT is greatest during the 10 days following surgery. Other common risk factors for DVT include:

- Limited mobility
- Congestive heart failure
- Personal or family history of venous thromboembolism
- Smoking
- Being overweight
- Respiratory failure
- Medications such as birth control pills
- Age—those who are 40 and older have a greater risk

### Preventing DVT after Surgery

There are a few things you can do to prevent DVT. Your doctor and nurse will work with you to determine the DVT prevention methods that are right for you.

- Move as soon as possible— After surgery, get out of bed and move around as soon as your doctor tells you it is OK to do so. Ask a nurse or family member to assist you if you feel unsteady.
- Exercises— Exercising your lower leg muscles is important especially when you sit for long periods of time. It decreases the pooling of blood in your legs. Try to do the DVT prevention exercises on the right several times a day, while you are recovering from surgery.
- Compression stockings—Your doctor may prescribe elastic compression stockings to help prevent DVT. (Dr. Guy's patients will require these)
- Blood thinners—Your doctor may prescribe blood-thinning drugs, also called anticoagulants, after surgery. Blood thinners prevent blood clots but also increase the risk of bleeding.



## DVT Prevention Exercises

There are a few simple exercises you can do to help prevent DVT, particularly in situations where you are immobile for a long time.

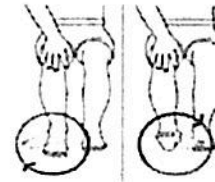
### Toe lifts

With your heels on the floor, lift the toes and front of the foot as high as possible then put both feet flat on the floor. This keeps your calf muscles working to prevent blood from pooling.



### Ankle Rotation

Rotate your feet clockwise and counterclockwise for 30 seconds as shown. Sit with your knee bent and circle your foot, first clockwise then counterclockwise. While doing the exercises, be sure that you are only moving your foot at the ankle. Your leg or knee should not move.



### Chair Leg Raises

Keeping your right leg straight slowly lift it off the floor, hold for a moment, then slowly bring it back down. Repeat the movement with your left leg.

## Preventing DVT When You Travel

There is some evidence to suggest that the risk of developing DVT may increase when you take a long car or airplane trip. Talk to your doctor if you are planning a trip during which you will be in a car or plane for an extended period of time. Your doctor may recommend that you wear compression stockings while you travel. Use the aisle of the plane or get out of the car to walk at least every hour.

- Flex and point your feet at least every 20 minutes.
- Stay hydrated. Drink a large glass of water every two hours.
- Avoid caffeinated or alcoholic beverages.

### Signs that you may have a DVT or PE

In your calf or thigh:

- Pain
- Swelling
- Redness
- Warmth

Or generally:

- Shortness of breath
- Palpitations
- Lightheadedness

## General Tips For DVT Prevention

There are many things you can do to lower your risk of DVT:

- Maintain an active lifestyle and exercise regularly. Walking, swimming and biking are all great exercise activities.
- Manage your weight with exercise as well as by eating a healthy diet based on Canada's Food Guide.
- Avoid smoking. Smoking causes vasoconstriction which restricts normal blood flow throughout the body.
- Get your blood pressure checked regularly and take steps to lower it if necessary.
- Speak to your family doctor about any personal or family history of blood clotting problems.
- Discuss the use of birth control pills or hormone replacement therapy with your family doctor before initiating treatment as these can also restrict blood flow in some individuals.