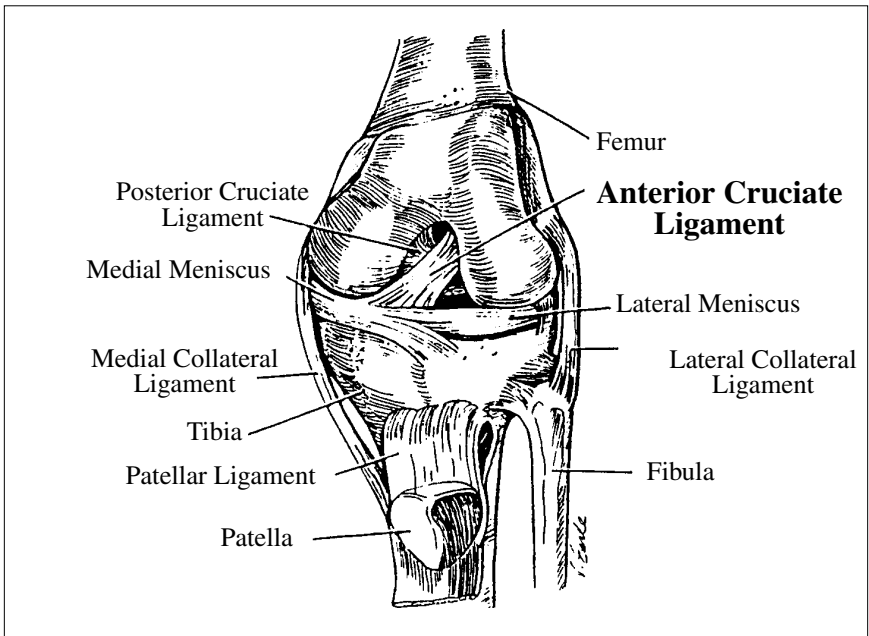


# Anterior Cruciate Ligament Surgery



UBC Hospital  
2211 Wesbrook Mall  
Vancouver BC V6T 2B5  
Tel: 604-822-7606

*We wish you a  
Speedy Recovery!*

## Table of Contents

---

General Information.....	1
Preparation for Surgery.....	1
Day Before your Surgery.....	2
Day of your Surgery.....	2
After your Surgery.....	3
Discharge Information.....	4
After an Anaesthetic.....	4
Pain.....	5
Bandage.....	5
Bleeding.....	6
Swelling.....	6
Bathing.....	6
Activity/Rest.....	7
Use of Crutches.....	7
Muscle Spasms.....	8
Nausea.....	8
Urinating.....	9
Diet.....	9
Helpful Tips while on crutches.....	9
Follow-Up Appointment.....	10
Notify Doctor or Go to Emergency if... ..	10
Exercises.....	11
Knee Straightening.....	11
Kneecap (Patellar) Movement.....	12
Knee Swings.....	13
Knee Bending.....	14
Hamstring Strengthening.....	15
Quads Strengthening.....	15
Notes.....	16

## General Information

---

The Anterior Cruciate Ligament (ACL) plays an important part in knee stability. It is the strongest ligament in the knee and allows you to stand, walk and run.

Anterior Cruciate Ligament Surgery involves providing the damaged ligament with additional tendon support or replacing the ligament with a tendon. This replacement tendon can be taken from the same knee area, the opposite knee, or rarely, a synthetic ligament may be used.

## Preparation for Surgery

---

### **Prior to your surgery date:**

- Purchase/rent crutches as you may need to use these to protect your knee for several weeks after surgery.
- Make arrangements for a responsible person to take you home and someone to stay with you overnight if your doctor has told you that you will go home on the same day as your surgery.

### **Your doctor may also instruct you to:**

- Purchase an Ice Compression Device (used to decrease pain and swelling) and Knee Brace if necessary. (Examples of ice compression devices available are Cryo-cuff, Polar Care Cub etc. Please read the package insert which explains how to use them.)
- Purchase medications (Anti-inflammatory, Pain medication, Gravol as directed).
- Have blood tests drawn as ordered by your physician.

## Day Before Your Surgery

---

- On the day before your surgery, the hospital will notify you of the time you should arrive at the Admitting Department.
- Unless you are told otherwise, DO NOT eat solid food or alcohol after midnight the night before your surgery.
- Bathe or shower with soap either the evening before or on the day of your surgery.

## Day of Your Surgery

---

- You may drink CLEAR FLUIDS (*apple and cranberry juice, water, coffee or tea {no cream}*) jello, clear pop (*cola, ginger ale*) up until 3 hours before your arrival at the hospital. (e.g. told to arrive at 10:00 a.m. - you can drink *clear fluids* until 7:00 a.m.).
- You are then NOT to drink or eat anything (including water, gum and candy) until after your surgery unless otherwise instructed.
- You will be admitted to the Ward or Surgical Day Care.
- Bring your Medications, Crutches, Ice Compression Device and/or Brace to the hospital with you.
- An intravenous may be started before your surgery through which you may receive antibiotics.
- Approximately 30-45 minutes before your surgery, a porter will take you on a stretcher to the pre-operative care area. A nurse will be present to discuss any of your concerns.

- Your knee will now be shaved.
- You will be seen by an anaesthetist prior to surgery. This is a good time to ask any questions concerning your anaesthetic. (p.s. writing your questions down will help you to remember them)
- From the pre-operative area, you will be moved into the Operating Room where the Anaesthetist and your doctor will perform your surgery.
- A General or Spinal Anaesthetic will be used during surgery. Your knee will be “frozen” with local anaesthetic which will wear off later in the day.
- The Ice Compression Device and/or Brace if required, will be put onto your knee when the operation is finished.

## After Your Surgery

---

After your operation you will be taken to the Recovery Room. A nurse will check your blood pressure and pulse frequently. You will wear an oxygen mask for a short period of time. It is important to indicate to your nurse if you are having pain or feel sick to your stomach. Your nurse will give you medication as ordered by your doctor. When you are ready, a porter will take you to your room.

- Your leg/foot may appear pink in colour. This is because it has been washed with a pink tinged antiseptic in the operating room.
- Your nurse will be checking the circulation to your foot frequently.
- Notify your nurse if you notice any numbness, tingling, or coolness of your foot.

- The intravenous will be left in place until you are able to drink fluids and have received the last dose of antibiotic as ordered by your doctor.
- Once you are able to drink clear fluids, you may start to eat solid foods.
- The nurse will help you to get up out of bed the first time.
- When you are feeling well enough, you will be discharged.
- A doctor or resident will inform you about a follow-up appointment.

## Discharge Information

---

### After an Anaesthetic

If you have had a general anaesthetic, the effects persist for many hours. The following precautions are advised by your anaesthetist:

- a) Do not drive your car for at least 24 hours.

*If you are involved in a car accident after surgery and it can be shown that your ability to drive carefully (brake suddenly, etc.) was affected by your knee condition, then your insurance claim might not be valid. Take this into account when you are considering your ability to drive. Consult with your doctor.*

- b) Do not drink alcohol or take recreational drugs for the first 24 hours following surgery and/or when taking pain medication (harmful interactions could occur with the medications you received during surgery and/or with the pain medications).
- c) Do not make any important decisions (i.e. sign important papers) for 24 hours.
- d) Have a responsible person stay with you overnight if discharged on the same day as your surgery.

## Pain

The sensation of “splashing” of fluid in the knee is normal and will gradually disappear. Take the pain medication as ordered by your doctor. Before taking any medications, discuss with your doctor any allergies that you may have.

**If you experience any adverse effects, stop the medication and notify your doctor.**

Do not drink alcohol when taking pain medications.

## Bandage

You will have an elastic bandage on your knee. It may be:

- A tube like sock** from mid calf to thigh. Ensure that this does not get wrinkled behind your knee. This should not be removed until you see your doctor.

**OR**

- A wrapped tensor bandage** (mid calf to mid thigh). This should be removed and rewrapped twice a day, from the mid calf to the lower thigh. This can also be removed for exercises.

**OR**

- A brace and toe to thigh tensors.** Do not adjust the bandage or brace unless the elastic bandage is loose or falling off – position your leg comfortably and rewrap from toe to thigh, reapply your brace with the hinges at the level of your kneecap.

This bandage does not need to be changed until your follow-up appointment unless it gets wet.

*The elastic bandage may also have padding under it. If the bandage feels too tight or you feel numbness and tingling in the foot, loosen the padding/ bandage.*

*Do not expose the wound until you see your doctor at your follow-up appointment.*

## Bleeding

If bleeding occurs, apply pressure for 10 -15 minutes or until the bleeding stops.

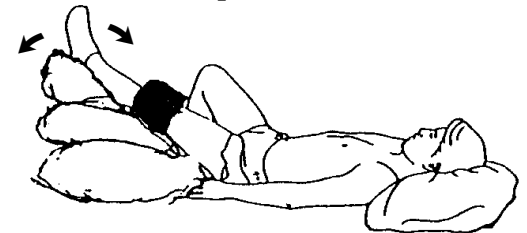
If bleeding continues, call an ambulance as needed.

## Swelling

Your knee may be swollen and somewhat uncomfortable for a period of time after your operation. This is normal.

To reduce swelling: May begin on day of surgery

- elevate your leg
- apply covered ice (or cryocuff) for 15 minutes
- move your foot in circles and up/down



## Bathing

- Do not shower until okayed with your doctor. You will need to sponge bath.
- For a tub bath, put 2-3 inches of water in the bottom of the tub and sit with your operated leg on the rim of the tub or on a footstool in the tub.

If your bandage gets wet, it must be changed to prevent infection. Contact your doctor's office to arrange a bandage change or go to the Emergency Department if necessary.

## Activity/Rest

Recovery after surgery is gradual. It is normal to feel weak and to tire easily during your first week or two at home. Alternate your periods of rest and activity.

To improve the movement and circulation to your foot and leg, we encourage you to move them frequently.

The purpose of this surgery is to improve the function of your knee. To regain movement and strength, it is important and necessary that you follow the exercises starting on page 11.

Use extra pillows to support your leg while in bed for the first 48 hours only. Following this time period, rest with your leg straight.

If sitting for long periods, rest your leg on a couch or stool. Ease your knee into a straight position.

Plans for returning to work are dependent on the nature of your job as well as your general health and recovery. Discuss this with your doctor.

## Use of Crutches

- At first walk using the crutches at all times to protect your knee.
- Unless you are told otherwise, start by putting a little weight on your repaired leg and gradually increase to full weight-bearing after two to three weeks.
- The crutches come forward **at the same time** as your repaired leg, followed by a step through with your other leg.

- You should walk as normally as possible, using the crutches to take weight off your repaired leg as needed (i.e. walk, not **hop** with crutches).
- Managing stairs with crutches can be difficult, so use a railing whenever possible and hold the extra crutch sideways along with the remaining crutch (or let someone else carry it for you!)

### **Remember** when going...

- |            |   |
|------------|---|
| Upstairs   | <ul style="list-style-type: none"><li>• good foot first</li><li>• crutches and repaired leg follow</li></ul>  |
| Downstairs | <ul style="list-style-type: none"><li>• crutches and repaired leg first</li><li>• good foot follows</li></ul> |

## Muscle Spasms

A few people experience hamstring muscle spasms in the back of the leg after surgery. These symptoms are due to the contraction of the cut tendon in this area. Sitting upright with your leg elevated high can cause this spasm. Laying flat and putting covered ice on your knee usually helps. This spasm does not hurt your surgical area and it is important to continue your exercises.

## Nausea

Feeling sick to your stomach can sometimes be bothersome after surgery. If you experience nausea, we advise you to drink clear fluids and take over-the-counter Gravol by mouth or suppository following the package instructions, unless your doctor states otherwise. Gravol is the trade name for dimenhydrinate. (It may be less expensive if requested by the name dimenhydrinate at the Drug Store).

## Urinating

If you are unable to pass urine and your bladder is hurting, put warm washcloths on your lower stomach or pour luke warm water over your genitals to allow your body to relax and let the urine come out. If you continue to have difficulties go immediately to the Emergency Department.

## Diet

Remember that a well-balanced diet is important for wound healing. You may eat when you feel like it but take small amounts at first.

Include high fiber and plenty of fluids in your diet to prevent constipation especially if taking Tylenol #3's or Codeine.

*Do Eat:*

- grain breads
- bran cereals (All Bran, Bran Buds, Fruit & Fiber)
- fruits (prunes, raisins, dates, bananas, apples)
- vegetables (broccoli, corn, beans, potatoes)

Ask your doctor or pharmacist about a mild laxative or stool softener, if needed.

## After surgery, while on crutches, you may find the following tips helpful

1. Wear safe footwear.
2. Wear loose fitting sportswear.
3. Use a backpack.
4. Carry sealed beverage containers (use caution when carrying hot beverages).
5. Don't stand on your feet for long periods of time especially if your leg is swollen.
6. If your leg is swollen, elevate it as needed. (see page 6)

## Follow-Up Appointment

If a follow-up appointment has not been arranged, call the doctor's office/Sports Medicine Clinic to arrange a follow-up appointment.

During this doctor's appointment, discuss any Physiotherapy required, use of crutches, bathing instructions, progression of weight bearing activities and eventual return to activities including sports and work.

## Notify the Doctor or go to the Emergency Department if any of the following happens

---

- pain unrelieved by your prescribed medication
- pus-like (yellow or green) drainage from your knee
- continuous bleeding
- numbness, tingling, coolness or change in colour to your leg/foot (ie. calf pain, difficulty moving toes/ankle up and down)
- continued severe swelling in your leg/foot
- chills or fever (38.5°C/101.3°F or higher)
- difficulty passing urine
- continuous or severe vomiting
- you have (unusual for you) shortness of breath or chest pain

## Exercises

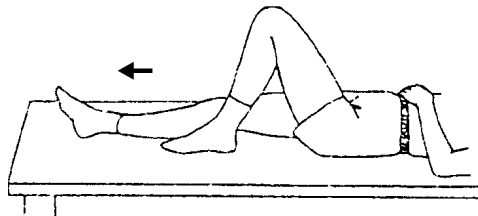
You must do these exercises to maintain or improve your knee movement and prevent stiffening. These movements are all passive which means they should be performed using the unrepaired leg or gravity to assist. It is normal to have some discomfort during movement. Use ice to control pain and swelling. Apply to your knee for 10 minutes prior to exercising.

- Begin these exercises gently the day of surgery and progress gradually as tolerated.
- If you have difficulty understanding or doing these exercises, contact the physiotherapist that you will be seeing for your knee rehabilitation program or contact your surgeon.

Some of these exercises require an elastic resistance. You can use a black theraband (can be purchased at a sporting shop), rubber tubing (hardware store) or a bicycle inner tube (bike shop).

### Knee Straightening

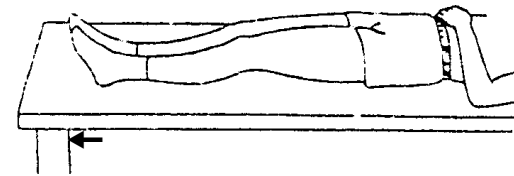
- Rest your leg on a bed, couch or floor and slowly ease knee into a fully straight position.



cont'd →

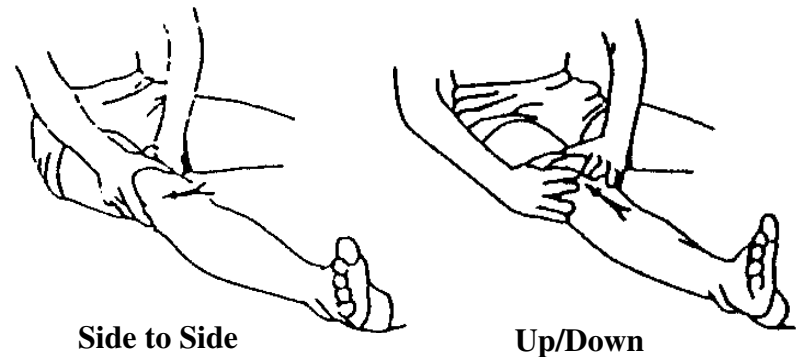
### Knee Straightening (cont'd)

- Hold for 15 seconds.
- NEVER force or bounce your knee straight, or push past 0° (hyperextension)
- Repeat 4 times, 4 times a day.



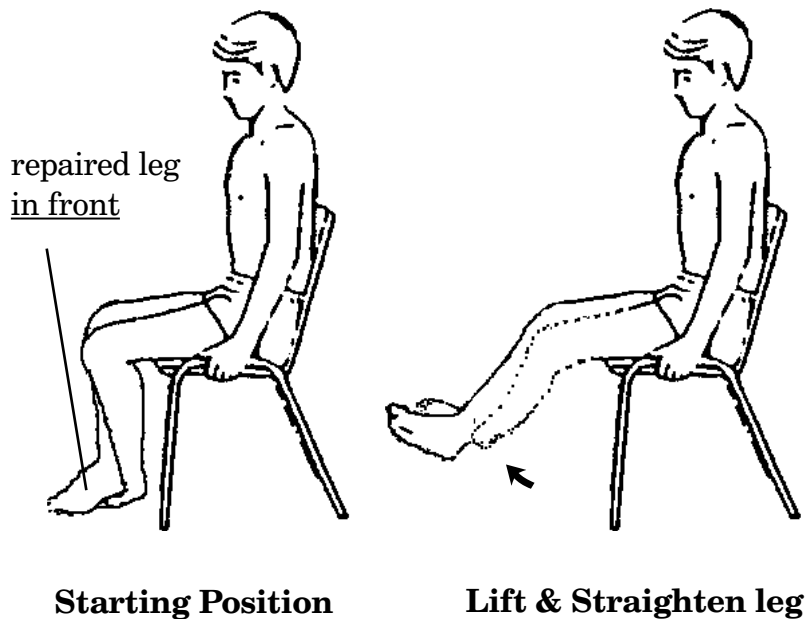
### Kneecap (Patellar) Movement

- Sit with your leg supported on a bed or couch.
- Place a small towel under your knee.
- With your thumbs, move your kneecap from side to side and then up and down.
- Your thigh muscle (quadriceps) must be relaxed and your knee straight to do this exercise.
- Repeat 10 times each way, 4 times a day.



## Knee Swings

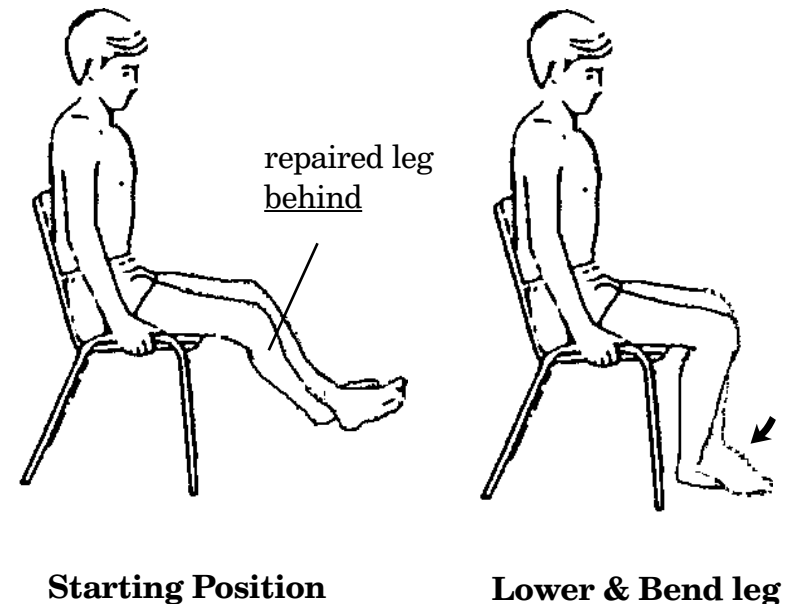
- Sit on a bed or chair that is high enough to let your knee bend fully.
- Cross your ankles with the repaired leg in front.
- Breathing in, straighten your repaired leg by lifting with the other leg until your knee is as straight as possible.
- Breathing out, slowly lower leg allowing your knee to bend as far as possible up to a right angle (90°). **DO NOT** bend further than this.
- Keep the repaired leg relaxed. Rest your hand on your thigh to check that the muscle stays relaxed and use deep breathing.
- Repeat 10 times, 4 times a day.



## Knee Bending

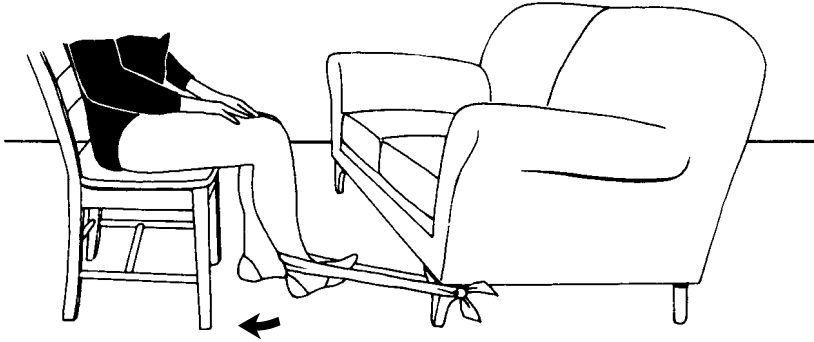
**The following exercise will help with bending your knee.**

- Sit on a bed or chair.
- Cross your ankles with the repaired leg behind.
- Breathe in deeply.
- Breathe out as you gently ease your repaired leg into a bent position by pressing back with the other leg, but no further than a right angle (90 degrees) or the limit of your brace.
- Relax and hold bent position for 5 seconds.
- Repeat 10 times, 4 times a day.



## Hamstring Strengthening

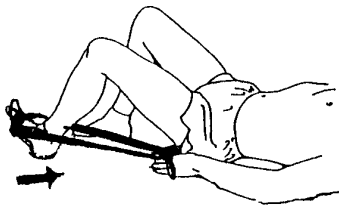
- Wearing socks, sit in a chair and bend your repaired leg by sliding your foot along the floor for resistance.
- Progress by bending your repaired leg back against an elastic resistance.



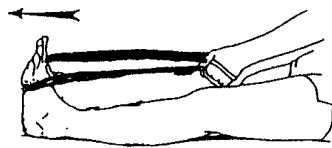
## Quads Strengthening

### a) Leg Press

- Sit with your leg supported on a firm surface and wear socks to protect your heel.
- Bend your knee towards your chest as far as you are able, then straighten your knee by sliding your heel on the supporting surface for resistance.
- Progress by pushing against an elastic resistance.
- Repeat 10 times, 4 times a day.



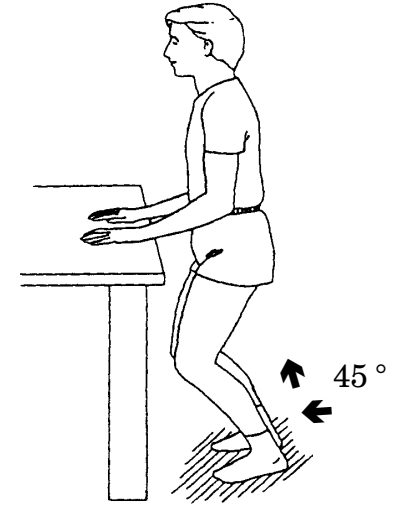
**Bend to 90° (right angle)**



**Straighten**

### b) 1/4 Squats

- Stand, hold onto a firm support for balance.
- Keep heels on the floor and bend knees about a 45 degree angle, then stand straight.
- Repeat 10 times, 4 times a day.
- Progress by putting more body weight onto repaired leg.



## Notes:

For more copies, email **phem@vch.ca** and quote  
Catalogue No. **FB.873.An86**

©Vancouver Coastal Health, July 2005

The information in this document is intended solely for the person  
to whom it was given by the health care team.