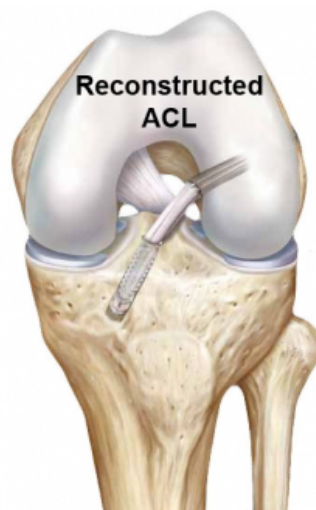


Anterior Cruciate Ligament (ACL) Reconstruction Pre-operative Education

This education package has been developed to provide you with information regarding preparing for surgery and what to expect after your surgery.

Please talk to your surgeon or other members of your healthcare team if you have any questions.



Your healthcare team:

Orthopaedic Surgeon:

The doctor who will perform your ACL reconstruction surgery is an orthopaedic surgeon who specializes in treating injuries and diseases involving the muscles, ligaments and bones of your body.

Anesthesiologist:

The doctor who will complete your pre-operative assessment (if required) and who keeps you safe, and pain free during surgery.

Registered Nurse (RN) or Registered Practical Nurse (RPN):

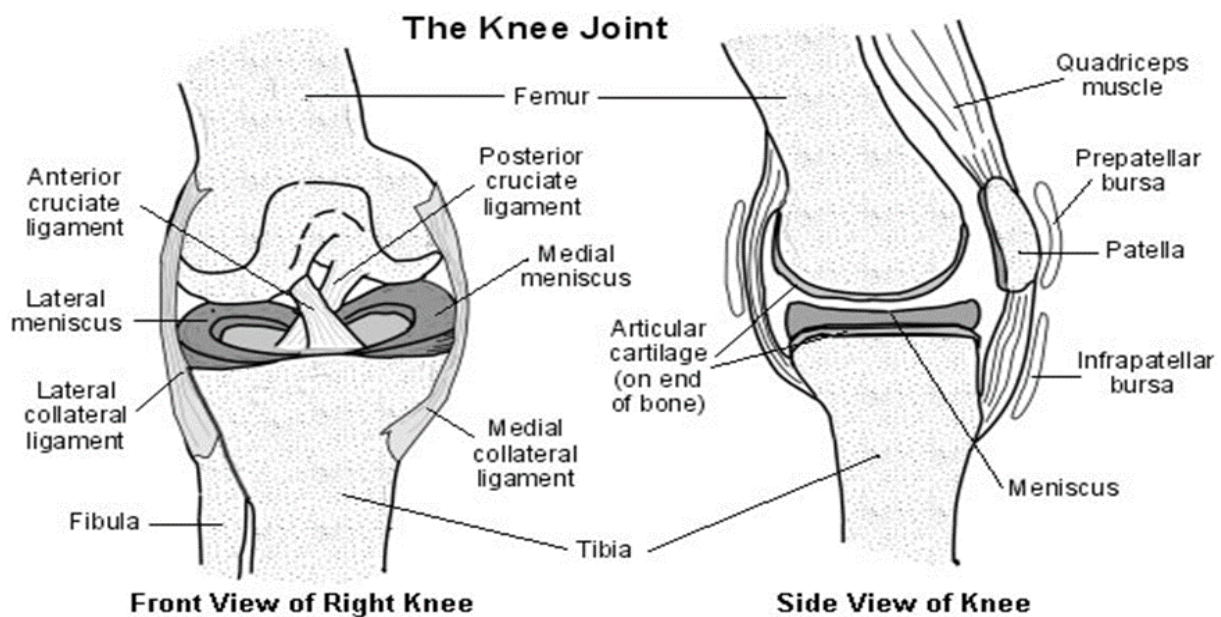
A nurse will complete your pre-operative assessment and will provide your medications before your surgery. A nurse will provide care to manage your healthcare needs after surgery, including pain management.

Physiotherapist (PT):

A PT is responsible for helping you recover your range of motion and strength after your ACL reconstruction. A PT is available for consultation before or after your surgery, if needed.

Overview of the Knee:

- The ACL is one of four major ligaments of the knee that connect the tibia (shin bone) to the femur (thigh bone).
- Ligaments are “cords” which join one bone to another. They guide, control, and help stabilize the joint.
- The ACL forms an “X” with your posterior cruciate ligament (PCL) in the middle of your knee joint.
- The meniscus or “knee cartilage” is a c-shaped disc that can be thought of as a shock absorber in your knee. It frequently tears when the ACL is damaged.



ACL Injury:

- The role of the ACL is to prevent forward movement and rotation of the tibia (shin bone) on the femur (thigh bone).
- A torn ACL has serious implications for the stability and function of the knee joint and may cause your knee to buckle and give way.
- Most ACL injuries occur when a twisting force is applied to the knee while the foot is firmly planted on the ground.
- Taking an active role in your physical recovery and rehabilitation is the best way of regaining your range of movement, strength, and function after ACL surgery.

How do I prepare myself for Surgery?

- Achieve full knee range of motion
- Reduce swelling from initial injury
- Regular exercise program
- Quit smoking
- Maintain a healthy weight
- Eat a balanced diet to support wound healing and building of muscle

What are the risks of Surgery?

- Stiffness of the knee
- Infection
- Nerve damage/numbness
- Blood clot
- Bleeding

Do I spend the night at the hospital?

- Most routine ACL reconstructions are performed as a day surgical procedure

Ensure you have not had anything to eat or drink from midnight onward the day of your surgery

- Necessary medications may be taken with a small sip of water.
- **DO NOT** shave your leg in preparation for surgery. This will be done in the operating room.

The day of Surgery:

- Do not bring your custom brace, ice cuff or compression stockings.
- You will be told what time to arrive at hospital and register upon your arrival.
- A nurse will review your medical history.
- You will have an intravenous (IV) started.
- You will be taken to the operating room and introduced to the operating room team, including your anesthesiologist.
- After your surgery, you will be transferred to the recovery room before preparing for discharge.
- After meeting the discharge criteria, you will be allowed to leave the hospital.
- **You must have a responsible adult drive you home and stay with you over night.**

Recovery after Surgery:

- The goal of early recovery is to focus on managing post-operative pain and swelling. Take prescribed pain medication as directed.
- Elevate and ice your knee for 15 to 20 minutes every 2 hours for the first 48 hours. After this, the ice can be used as needed to manage pain and swelling.
- Start bending your knee (out of the immobilizer brace) starting the day after surgery.
- Walk with your crutches and immobilizer brace.
- Contact your surgeon's office the next business day to make a follow up appointment (1 to 2 weeks).
- Remove main bandage 48 hours after surgery. Apply opsite over steri strips (small white pieces of tape). Reinforce if needed.
- Showering is permitted 48 hours after surgery with the opsite dressing in place. Keep wound as dry as possible. If the opsite dressing is peeling, trim and reinforce it. **DO NOT** peel it off for at least 7 days or the steri-strips will be removed prematurely.
- Once pain and swelling are controlled, recovery focuses on increasing knee range of motion and improving your walking pattern.
- The last stage of your recovery concentrates on a strengthening program. It is normal to notice some muscle wasting or "atrophy" after your knee surgery. Muscles greatly contribute to the stability of your knee. Strengthening the muscles of your knee will help you to recover from the injury, and to regain your strength and function after surgery.
- ***Do not pivot, twist, squat, kneel or perform physical labor for 6 months after your ACL surgery.***

Call your Surgeon or go to your local hospital emergency if:

- Your incision becomes red, swollen, or a foul discharge is noted, or you have a fever (greater than 38 Celsius/100 Fahrenheit).
- Increased leg swelling, shortness of breath or chest pain.
- If the pain increases rather than decreases.

Post-Operative ACL exercises:

- Start pumping your ankles as soon as you wake up after your surgery.

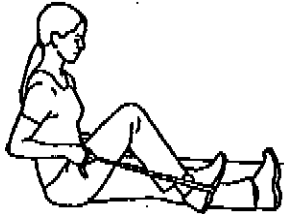
Ankle Pumping

While lying on your back or sitting, bend and straighten your ankles briskly. If you keep your knees straight during the exercise you will stretch your calf muscle. Repeat 10 times every hour



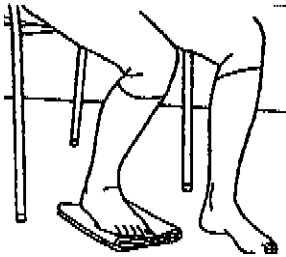
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- The following exercises should start ***the day after*** your ACL reconstruction.
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Long Sitting Knee Bends



Put a belt or a long towel around your operated foot and a plastic bag under your foot. Using a belt to assist you, bend your knee and slide your foot toward your buttock along the bag as far as possible. Hold 10 seconds
Repeat 10 times, 3 times per day

Heels Slides



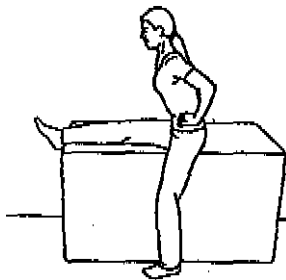
Sitting with feet on floor and a towel under your operated leg. Bend your knee, to slide your foot under the chair as much as possible and use your other leg to assist. If your floor is carpeted, place a plastic bag under your foot. If your floor is hardwood or tile, wear a sock or place a towel under your foot. Hold 10 seconds
Repeat 10 times, 3 times per day

Hip Flexor Stretch



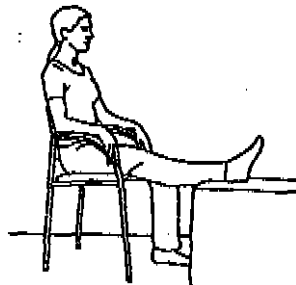
Lie on your back. Pull non-operated knee as far as possible towards your chest to stretch the hip on the operated side. Hold for 20 seconds
Repeat 10 times, 3 times a day.

ACL Pre-operative Education



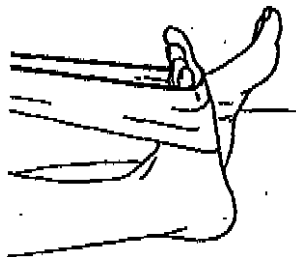
Seated Hamstring stretch

Sit on a bed with one leg straight in front of you, with your heel over the edge and the other leg on the floor as shown. Bend your upper body forward, keeping your back straight. Feel the stretch at the back of your thigh. Hold for 20 seconds
Repeat 5 times, 3 times per day.



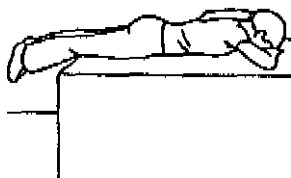
Prolonged Extension Stretch

Sit on a chair with your operated leg supported on a stool or chair as shown. Let gravity straighten your leg in this position. Hold for 10 minutes.
Repeat 3 times per day



Calf stretch

Sit on the bed with a towel or strap around your foot as shown. Pull the top of your foot towards your body until you feel a stretch in the back of your calf. Hold for 20 seconds.
Repeat 5 times, 3 times per day



Prone Leg Hangs

Lie face down on a bed or table with your feet over the edge. Let the weight of your feet and leg straighten you knees. Rest in this position for 5 minutes.
Repeat 3 times per day.

The following exercise should begin **one week** after your surgery

Quad Set in Standing- **Start 1 week after surgery**



Stand with your back against the wall with both feet on the floor. Place a small rolled towel behind your operated knee. Press the back of your operated knee into the towel. Hold for 5 seconds. Repeat 10 times, once per day.

Walking after ACL surgery:

- After your surgery you will be provided with an immobilizer brace that you are required to wear overnight for comfort and when walking. Wear the brace for the first 1 to 2 weeks until your swelling decreases and you can fit into your custom brace.
- You will need to use crutches when you are walking and your outpatient physiotherapist will assess your walking pattern and wean your use of crutches.
- You can take as much weight through your operated leg as your pain and your comfort allows. This is called *protected weight bearing*, and will not damage your reconstructed ACL graft.
- There is no benefit in walking without the crutches early. Keep them until you can comfortably walk without changing your walking pattern.

Outpatient Physiotherapy follow-up:

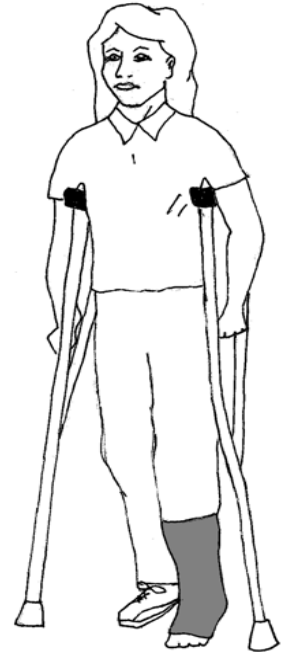
- Outpatient physiotherapy follow-up is crucial to regain your knee range of motion and strength. It is recommended to start outpatient physiotherapy 1 week after your surgery.
- You can arrange follow-up physiotherapy either at the hospital or at a private Physiotherapy Clinic- arrange your post-op appointment **BEFORE** your surgery.
- Your outpatient physiotherapist will provide you with additional exercises as your ACL graft continues to heal.

Using crutches after your ACL surgery:

- If you are seeing a physiotherapist pre surgery, have them review crutch walking with you and ensure your crutches are adjusted correctly.

Safety First!

- Take your time all the time.
- Take extra care in wet or slippery areas.
- Remove any small mats that may be slippery.
- Be careful when moving from one surface to another, such as moving from a carpet to a tile floor.
- Take small steps in a circle to turn. Do not turn quickly on your good leg.
- Wear low-heeled supportive shoes.
- Use a handrail any time there is one.



Fitting crutches:

- The tops of the crutches should be 3 finger widths below your armpit.
- The handgrips should be at wrist level when your arms are at your sides.
- Do not lean on your crutches as this can injure the nerves under your arms.
- Squeeze the top of the crutches to your sides to support your weight through your hands when you walk or stand.
- Hold the crutches close to your body - about 6 inches (15 cm) from each foot.
- Check the screws, wing nuts and crutch tips every day to make sure they are secure.

Using crutches on stairs:

Weight bearing as tolerated going **UP** the stairs

- The good leg steps up first, then the crutches and your operated leg follow together.
- Face the step with both crutches under one arm and the other hand holding the handrail.
- Stand close to the step.
- Put your weight on the handrail and the crutch.
- Step up with your good leg.
- Straighten your good leg and bring your crutch and your operated leg up together.



Weight bearing as tolerated going **DOWN** the stairs

- The crutch and your operated leg go down first, and your good leg follows.
- Face the step with your crutches under one arm and the other hand holding the handrail.
- Stand close to the step.
- Place your crutch on the middle of the next step, and step down with your operated leg.
- Step down with your good leg.



Walking with crutches after ACL reconstruction:

- Place one crutch under each arm.
- Grip the crutch handles firmly.
- Take your weight through your hands by squeezing the crutches to your side.
- Bring the crutches and your operated leg forward together.
- Step forward with your operated leg.
- Take as much weight as you are comfortable through your operated leg.
- Take the remaining weight through your hands.
- Step forward with your good leg.

You may begin using a “step-to” walking pattern (bringing one foot level with the other) before progressing to a “step-through” walking pattern with your crutches.



Things to remember

- Ice, elevate, and take your pain medications as needed.
- You will need your crutches for 1 to 2 weeks after surgery. Please ensure you have practiced and are comfortable using your crutches **BEFORE** your surgery.
- Please review your exercises before your surgery so you are well prepared for your recovery.
- Arrange for your outpatient Physiotherapy follow-up at a location that is convenient for you.
- Speak with your Surgeon **BEFORE** your procedure if you have any questions.