



trent health in motion

Enhancing HEALTH... Optimizing PERFORMANCE

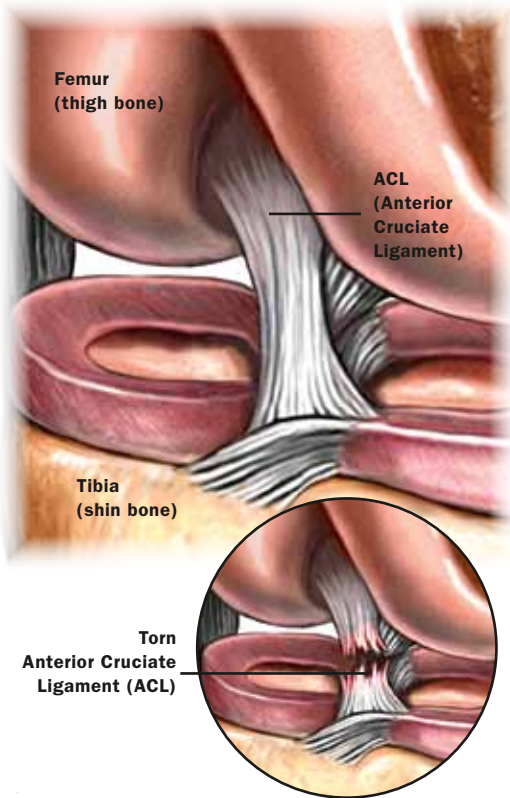
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The Normal Knee



ANTERIOR CRUCIATE LIGAMENT (ACL) TEAR

What is the Anterior Cruciate Ligament (ACL)

The anterior cruciate ligament (ACL) is one of four ligaments critical to the stability of the knee joint, the largest and most complex joint in your body. The ACL is located in the middle knee joint and connects the front part of the shin bone to the back part of the thigh bone.

What can cause an ACL tear?

The ACL may become injured from a direct blow to your knee, or occur as a non-contact injury while pivoting, making a sudden stop, or hyperextending the knee while jumping.

How is an ACL tear diagnosed?

Your doctor or physiotherapist will physically examine your knee, asking about symptoms and history such as how/when you injured your knee. A hands-on examination of your knee includes the Lachman Test which determines any increased laxity (looseness) of the knee when the knee is flexed at 20 degrees.

Symptoms may include:

- hearing a “popping” sound when the injury occurred
- weakening, abnormal knee motion or giving way of the knee
- swelling, pain, stiffness or grinding that limits your activities

Diagnostic tests may include:

- MRI Scan - imaging that shows the structures inside the knee joint
- X-rays - Imaging that shows the bones and any fractures
- Arthroscopy - a thin, lighted tube that is inserted through a tiny incision to look at the injury inside the knee

Treatment for ACL tears

Treatment will be determined based on your age, your activity level, the type of sport you participate in and the extent of your ACL injury.

Non-surgical treatments may include:

- Bracing – to provide stability to the knee
- Physiotherapy – to provide pain relief, restore range of motion, manage swelling and re-strengthen stabilizing muscles
- Hydrotherapy – to assist in the re-strengthening process and re-train movement patterns in a controlled, reduced weight bearing environment

Surgical treatments:

- reconstruction of the ACL involves building a new ligament out of tissue from your tendon or muscle, from a donor or from synthetic material

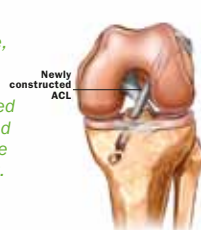
Surgical Treatment (Reconstructive Surgery)



ACL reconstruction surgery is performed using a combination of open surgery and arthroscopy. It begins with a small incision in your leg where small tunnels are drilled in the bone.



A graft from your tendon or muscle, from a donor or from a synthetic material, is passed through the drilled tunnels to replace the torn ligament.



The graft is then fixed in place with screws, staples or a type of button, and the incisions are closed with sutures. As healing occurs, the bone tunnels fill in to secure the tendon.

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Learn more about
Injuries & Conditions
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under "Problems We Treat"

Rehabilitation after ACL reconstruction surgery

The overall success rate for ACL surgery is very good. Take an active part in your recovery.

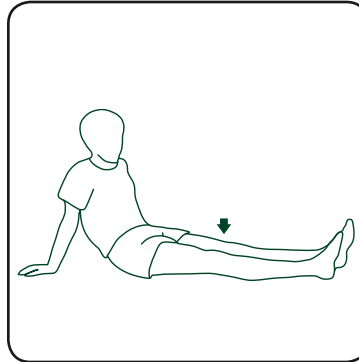
- elevate your knee to control swelling and pain
- apply ice 2 to 3 times per day for no longer than 15-30 min. at a time
- to prevent infection keep the incision clean & dry
- pain and/or anti-inflammatory medications should be taken as prescribed to control pain and improve mobility
- physiotherapy, including exercises for your quadriceps and hamstrings, should begin shortly after surgery
- your surgeon will inform you of when to begin weightbearing. Until such time you may need to wear a leg brace to limit bending, and use crutches to assist in your movement and refrain from putting weight on the injured leg
- normal walking may take up to 5 or 6 weeks
- strenuous activities will be limited and guided by your progress and rehabilitation protocol
- follow-up appointments after your surgery are important to attend so your progress can be monitored

Basic Exercises

It is important to follow a rehabilitation protocol designed for ACL reconstruction. Begin these basic exercises (*in diagrams*) for regaining range-of-motion and muscle strength only after your physician or physiotherapist has recommended them. Call your physician if you experience any of these signs:

- increased swelling and/or pain
- fever and/or chills
- constant drainage or bleeding from the incision
- the incision won't heal

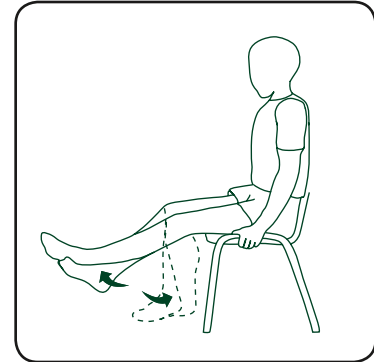
Medical attention is necessary to be sure these are not signs of more serious complications



Hip & Knee
Strengthening: Quadriceps Sets

Tighten muscles on top of thigh by pushing knees down into floor.

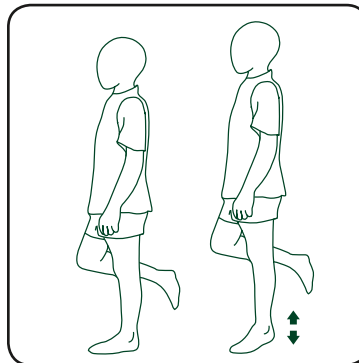
Hold ___ seconds.
Repeat ___ times.
Do ___ sessions/day.



Hip & Knee
Self-Mobilization: Seated Knee Flexion/Extension Stretch

Gently push injured leg downward with good leg until you feel a stretch.

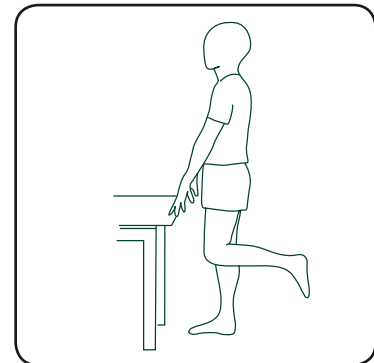
Hold ___ seconds. **Relax.**
Repeat ___ times.
Do ___ sessions/day.



Ankle & Foot
Standing Unilateral Heel Rise

Balance on ___ RIGHT ___ LEFT foot, then rise on ball of foot.

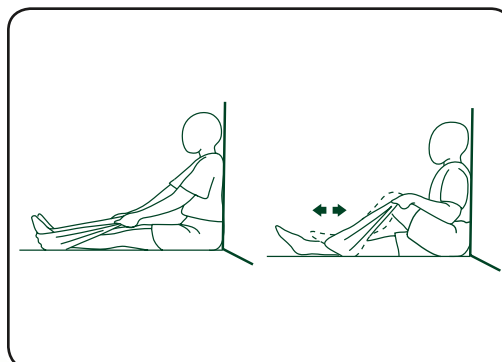
Repeat ___ repetitions/set.
Do ___ sets/session.
Do ___ sessions/day.



Hip & Knee
Strengthening Standing Knee Flexion

Standing, bend knee up as far as possible.

Hold ___ seconds.
Repeat ___ times.
Do ___ sessions/day.



Hip & Knee
Passive Range of Motion Knee Flexion

With towel around heel, gently pull knee upwards with towel until stretch is felt.

Repeat ___ repetitions/set.
Do ___ sets/session.
Do ___ sessions/day.