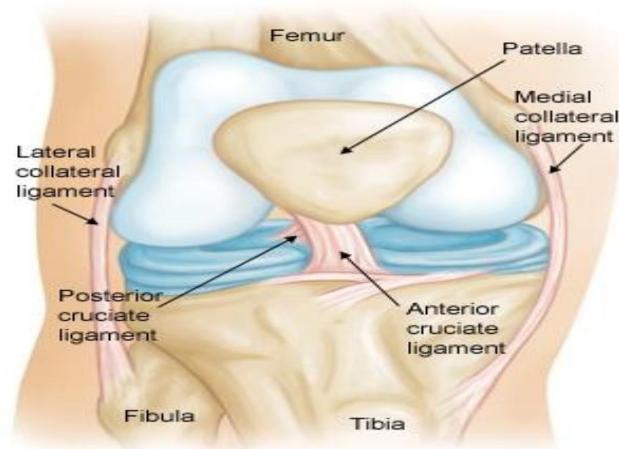


My Experience With an ACL Injury, What it is and What You Can do About it

As a young athlete whose outlet and passion was soccer, getting the news for the first time that I tore my ACL was extremely heartbreaking. Especially since this was my first big injury and I had almost little to no knowledge on ligament injuries. With the help of a great support system made up of my parents, coaches, physiotherapists, and surgeons, I was fortunately able to fully recover from this injury like many others do. I am now happily back playing soccer! I know this injury and its recovery process can seem extremely daunting and scary so that is why I am going to share some of the knowledge I picked up during this long rehabilitation process to hopefully make it easier for someone going through a similar situation.

So what is an ACL anyways?

Your ACL (Anterior Cruciate Ligament) is one of four ligaments found in the knee that help to stabilize the knee joint. This ligament runs diagonally in the middle of the knee and forms an X with your PCL (Posterior Cruciate Ligament). The ACL also connects your femur to your tibia (top of shin bone) which helps to prevent the tibia from sliding out in front of the femur.

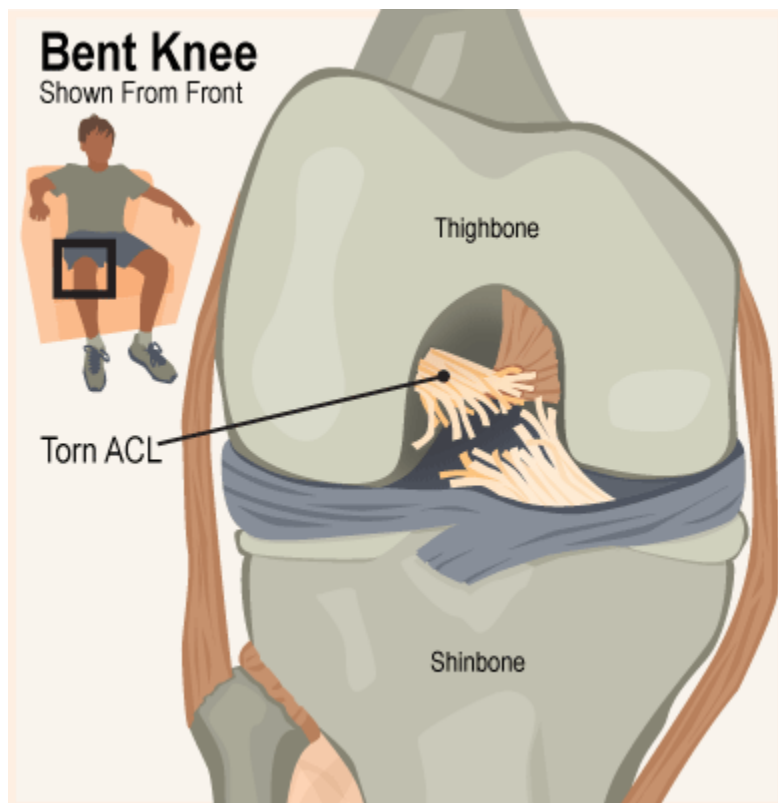


Now that we know what an ACL is, we can now move on to learning about different types of ACL tears and how they happen.

ACL Tears

A tear in the ACL is either classified as a second or third degree sprain to the ligament. A second degree sprain of the ACL is when the ligament partially tears due to stretching. Partial tears are rare in terms of ACL injuries. A third degree sprain is when the ligament completely tears and is split into two pieces, this is the most common.

ACL injuries usually happen during sports or fitness activities that include having to suddenly change direction, pivoting while one foot is firmly planted on the ground, jumping, sudden stops, and high chance of collisions and contact. Most people who tear their ACL will injure it without making contact with a person or object, which is unlike my case where I tore my ACL directly due to sustaining a blow to my knee. Studies found that more than 70% of people injured their ACL without any contact to their knee.



What Does a Torn ACL Look and Feel Like?

- One of the most common symptoms that patients recall hearing at the time of the injury is a “popping” sound
- Feel as though your knee is going to and will give out
- Severe pain
- Rapid swelling and inflammation
- Loss of range of motion
- Discomfort walking and inability to run



Risk Factors

Now it is no surprise that I tore my ACL since I would be considered high risk for this type of injury according to the risk factors.

- I am an athlete that plays soccer which is a sport that includes a lot of pivoting, cutting, contact, and sudden stops
- I continued to use improper and faulty movement patterns such as having my knees bend inwards when I would jump and squat
- I often play on turf fields for soccer and I was playing on one when the injury occurred
- I am a female which surprisingly makes me more susceptible to tearing my ACL due to a number of factors such as
 - Physical conditioning
 - Muscular strength due to hormones like estrogen
 - Neuromuscular control
 - Anatomical differences such as having a wider pelvis

You Tore Your ACL, Now What?

Treatment ultimately depends on the patient's lifestyle. If you are an athlete whose main goal is returning back to competitive sports, like I was, then surgery is in your best interest. On the other hand, if you have a low activity level and are of old age then it may be more reasonable to consider the non-surgical route. Both routes of treatment will need physiotherapy.

Non-surgical Treatment

- Important to note that without surgery your injured ACL will never completely heal
- Your doctor may recommend that you wear a brace to protect your knee from instability
- You will most definitely need to complete a physiotherapy program if you go the non-surgical route
 - Specific exercises will restore mobility, range of motion, and function to your knee
 - The leg muscles that support the knee will also be strengthened

Surgical Treatment

- ACL reconstruction surgery
 - Most tears cannot be stitched back together
 - The torn ligament is almost always replaced with a tissue graft
 - Grafts can be obtained from several sources
 - The most common are from your patellar tendon and hamstring tendon
 - A quadricep tendon graft and cadaver graft can also be used
- The surgery is done with an arthroscope using small incisions
- For a few weeks after surgery you will be required to wear a brace to prevent hyperextension and use crutches

Even though I went the surgical route, since I wanted to return to sports, I still had to do physiotherapy before my surgery and physiotherapy after my surgery for 12 months. After my physiotherapist cleared me to go back to soccer, I had to get fitted for a brace as my physiotherapist did not think it was safe for me to return to sport without any protection for my knee. I will have to wear this brace for 1-2 years, which is very common, until my physiotherapist feels that my leg and knee are strong enough without any additional support.

So What Does Physiotherapy Entail?

The main goals of rehabilitation for an ACL injury are:

1. Gain back strong stability and mobility
2. Repair muscle strength
3. Reach the function level you were at pre-injury

In order for the surgery to be worth something, you have to make sure that you are committed to your physiotherapy plan or else you will never fully recover. You have to find the time to do your stretches and exercises at home not just when you go into the clinic. Trust me the results at the end are worth it! Your hard work will pay off.

Basic Stretches Include:

Active Knee Flexion

Lie on your back with both legs straight. Bend one knee up as far as you can without using your arms and then straighten your leg out so it is flat on the floor/bed again. Repeat for 2 sets of 10 reps.



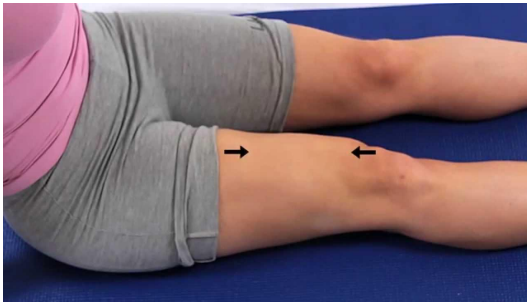
Knee and Range Extension

Lie on your back with a rolled up towel under your ankle. Let your knee passively extend and relax as much as able. Work up to five minutes.



Quadriceps Isometric Contractions

Tighten the quadriceps muscle on the front of the thigh by trying to push the knee downward into the bed. Hold this position for five counts. Do 2 sets and 10 reps of this exercise.



Isometric Hamstring Heel Digs

Lay down on your back with one leg bent and the other leg extended with the knee slightly bent so your heel is against the floor/bed. Press your heel against the surface and hold this contraction for 5 seconds. Do 2 sets of 15 reps.



Side Lying Hip Abductors

Lie on your left side and slowly raise your right leg. While raising your leg make sure that your heel is pointing towards the ceiling and that your leg remains aligned with the back at all times without allowing your pelvis to roll backwards. Then lower your leg slowly while controlling the movement. Do 2 sets of 10 reps.



Active Straight Leg Raise

Lie on your back with a pillow behind your head. Lift one leg up and hold in that position for two seconds. Then slowly lower your leg to the count of 5. Do 2 sets of 10 reps.



What Next?!

If you think you have torn your ACL or have been diagnosed by a doctor, you should see a physiotherapist. Together we can come up with a treatment plan that works best for you! Email us at informphysio12@gmail.com for more information!