Sheffield Knee & Hip Pain

Sheffield NHS Primary Care Trust

Knee Ligament Injuries

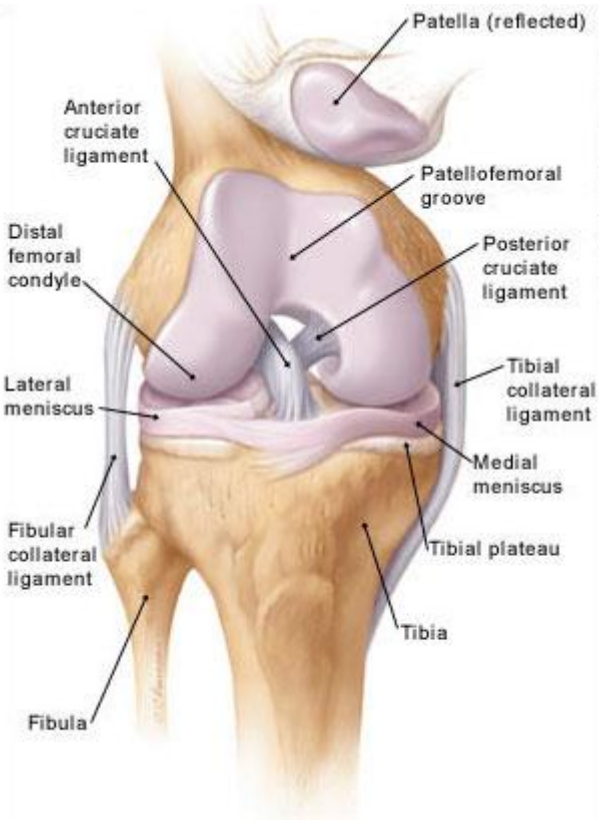
General Information

Ligaments connect one bone to another. They provide your knee with stability and limit the amount it can move from side to side.

There are four major ligaments within the knee which can be split into two groups:

1. The Collateral ligaments (Medial and Lateral or MCL & LCL). These ligaments run down the inside (medial) and outside (lateral) of the knee joint giving it stability in a sideways direction.

2. The Cruciate ligaments (Anterior and Posterior or ACL &PCL). These ligaments form a cross inside the knee joint and give stability in a backwards and forwards direction (anterior meaning front and posterior meaning back).



Knee pain due to a ligament injury tends to be the result of trauma and there is usually a good history of a specific injury - either from sport or some form of accident.

The pain is therefore more likely to come on suddenly. If you have had gradual onset of knee pain without having had any kind of injury, ligament damage is unlikely to be the cause.

Preventing knee ligament injury

Since usually due to sports injuries or accidents, knee ligament damage is difficult to prevent however the following considerations may help:

- Always warm up before intense exercise
- A good level of general fitness will keep muscles around the joint healthy and supportive

- Wear appropriate footwear for the activity and replace footwear if it shows signs of wear

Medial Collateral Ligament Injury

- The medial collateral ligament is strong and can be sprained or completely ruptured (torn) if you twist your straightened leg at the same time as being knocked sideways, for example, when being tackled in rugby or through a skiing injury.
- Pain is felt immediately on the inner aspect of the joint and it may be tender to press over the area
- In severe MCL injuries there may also be cartilage (medial meniscus) involvement causing the knee to swell rapidly.

How can I manage an MCL injury?

- Rest the leg and apply ice wrapped in a towel or cloth for 10-15mins every few hours for the first 48hours after the injury.
- Take some painkillers so that you are comfortable.
- A simple strain of the ligament should settle very quickly over 2-4 weeks.
- If things are not improving seek medical advice.

What other treatments will help?

- Treatment depends on the severity. In mild cases the above advice may be all that is needed
- Physiotherapy with strengthening exercises may be necessary.
- Supporting the knee with a knee brace may be of help
- In a small number of cases surgery may be necessary however this is not common.

Lateral Collateral Ligament Injury

- Less common injury, often associated with major knee trauma rather than in isolation.
- If occurs alone it is due to a force from the inside of the thigh causing the outside aspect of the joint to widen.
- The knee is painful and tender to press down the outer aspect of the joint.

How can I manage an LCL injury?

- Rest the leg and apply ice wrapped in a towel or cloth for 10-15mins every few hours for the first 48hours after the injury.
- Take some painkillers so that you are comfortable.
- A simple strain of the ligament should settle very quickly over 2-4 weeks.
- If things are not improving seek medical advice.

Anterior Cruciate Ligament Injury

The ligaments inside your knee joint are called the anterior cruciate ligament (ACL) and the posterior cruciate ligament. These ligaments are vital to the stability of your knee joint when it is in different positions, particularly in the forward and backward movements of the knee joint.

- A torn ACL is a relatively common knee injury amongst sports people and is more common in female athletes
- A torn ACL usually occurs through a twisting force being applied to the knee whilst the foot is firmly planted on the ground or upon landing.
- A torn ACL can also result from a direct blow to the knee, usually the outside, as may occur during a football or rugby tackle. This injury is sometimes seen in combination with an MCL tear and medial meniscus (cartillage) injury
- In 80% of injuries there is no contact with another athlete.

Symptoms of a torn ACL

- There may be an audible pop or crack at the time of injury
- Sudden onset of pain in particular immediately after sustaining the injury
- Immediate onset of extensive swelling is usual though may be delayed in some cases
- An initial feeling of instability, which may be masked later by extensive swelling
- Inability to continue exercising

How do I manage an ACL injury?

- Stop the sport/activity immediately (usually it's impossible to play on)
- Rest and application of ice packs wrapped in towel or cloth for 10-15mins every few hours for the first 48hours
- Use simple pain killers
- Seek medical advice Immediately

Treatment for an Anterior Cruciate Rupture

Firstly a full assessment of the knee is required to ascertain whether other structures within the joint have been damaged by the injury. (eg. MCL and meniscus)
An MRI scan is usually performed

Treatment may be non-surgical with physiotherapy and knee bracing or surgical with repair of the damaged ligament. There are various techniques used to repair the ACL and which is used depends on the patient, the severity and location of the tear and the degree of damage to other structures in the knee.

When is Surgery Required?

Surgery is performed more often than not following Anterior Cruciate ligament tears. The decision on whether to operate is based on a number of factors, including the persons age; lifestyle; sporting involvement; occupation; degree of knee instability and any other associated injuries

Older people who are less active and perhaps injured their ACL following a fall as opposed to during sport would be unlikely to undergo surgery

A younger, fit person who regularly plays sport and would be more likely to adhere to a complex rehabilitation program is very likely to be offered an operation.