Patient Information Sheet

Knee Meniscal Cartilage Injury

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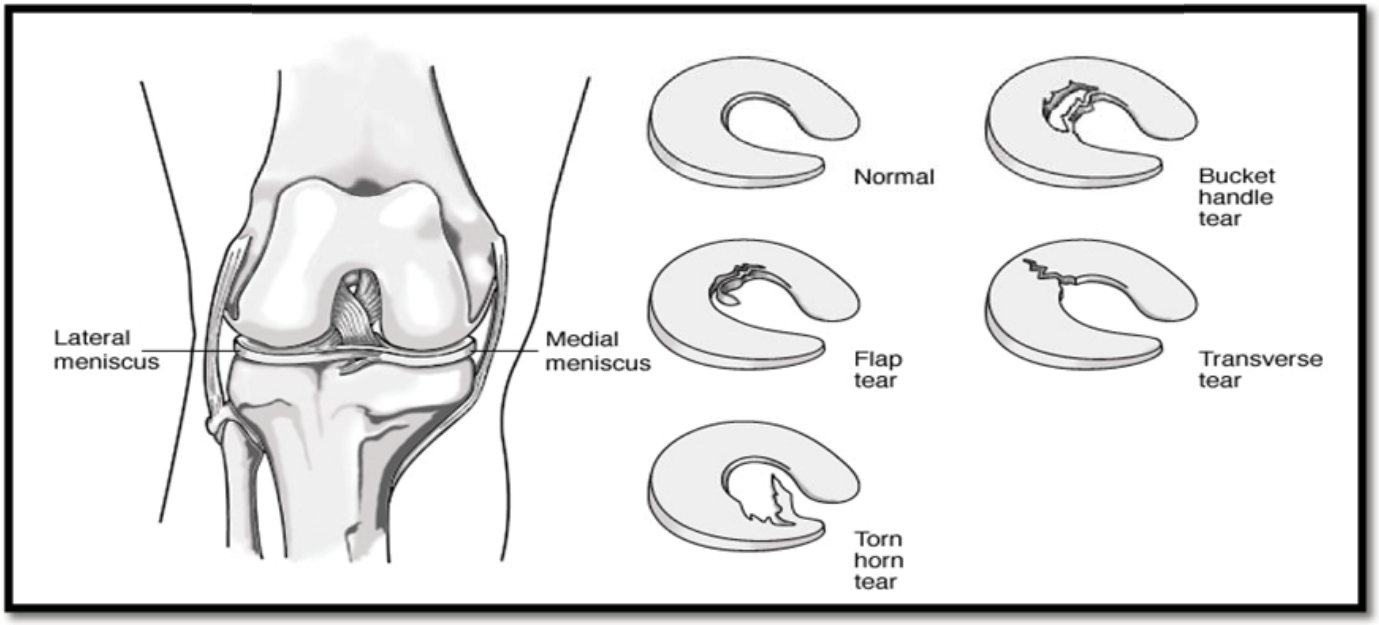
There are two **menisci** in the knee; each rests between the thigh bone (femur) and shin bone (tibia). The menisci are made of tough cartilage and conform to the surfaces of the bones upon which they rest. The menisci function to distribute a person's body weight across the knee joint and to improve the shape of the join between the 2 bones, contributing to the stability of the knee joint. Without the meniscus present, the weight of your body would be unevenly applied to the bones in your legs (the femur and tibia). The function of the meniscus is critical to the health of the knee.



Pain and Symptoms

- **Pain.** The degree of this will vary according to the site and extent of the injury and the type of activity being performed. There may be severe pain if a torn fragment of meniscus catches between the tibia and femur. Sometimes, a past injury causes pain months or years later, particularly if the affected knee is injured again.
- **Swelling.** The knee may swell immediately if blood vessels are damaged with the injury, or swell more slowly as part of the inflammatory process that occurs following injury. Swelling is sometimes difficult to see.
- **Knee function.** You may be unable to straighten or bend the knee fully. In severe cases, no walking is possible due to the intensity of the pain. The knee may click, or may 'lock' from time to time if the torn fragment interferes with normal knee movement. A locked knee means that it gets stuck when it is bent and cannot be straightened without manually moving or manipulating the leg).

Causes of Injury

The two most common causes of a **meniscal tear** are due to traumatic injury (often seen in athletes) and degenerative processes (seen in older patients who have more brittle cartilage). The most common mechanism of a traumatic **meniscus tear** occurs when the knee joint is

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bent and the knee is then twisted. The meniscus may tear fully or partially. The seriousness of the injury depends on its size, and the exact site and shape of the tear.

In severe injuries, other parts of the knee may also be damaged in addition to a meniscal tear. For example, a person may also sprain or tear a ligament or have problems, with the joint surface.

Meniscal cartilage does not repair very well once it is torn since it does not have a good blood supply, except in children where some repair is possible. In the adult the outer edge of each meniscus has some blood vessels, but the area in the centre has no direct blood supply (it is 'avascular'). So, some small outer tears may heal in time, but larger tears, or a tear in the middle of a meniscus, tend not to heal. However many meniscal tears, even if they do not repair can settle sufficiently to avoid surgery.

In some cases the symptoms of meniscus injury go away on its own after a few weeks. However, in many cases the symptoms persist for longer.

Diagnosis

All meniscal tears require a professional assessment and many require a surgical opinion. Central to diagnosis is professional clinical assessment. Further investigations such as X-Ray and MRI can be used when necessary to exclude other pathologies and to assess the extent of the injury.

Treatment

Treatment of a meniscal tear depends on several factors including the type of tear.

Non-Surgical

The blood supply is poor in certain parts of the meniscus and therefore healing is often poor with tears in the avascular zones. If the tear is small and is in the vascular zone there is a greater chance that the meniscus can repair. Also if the tear is only small or if there is only a small amount of degenerative change then a conservative program should be attempted. Treatment would usually include the following:

- **Physiotherapy.** All patients with meniscal tears should have a Physiotherapy guided rehabilitation plan. The aim of the program will be to restore movement to the knee joint and strength to the surrounding musculature. Balance and sense of position (proprioception) are also affected by this injury and exercises will address any deficiencies with these areas. This will ensure the speediest recovery and will help to minimise complications.
- **Activity Modification** – Aimed at protecting the knee and also allowing the region to settle.

Surgical

With certain types of tears or if the knee has failed to settle with conservative rehabilitation then a review with a specialist would be required. Either a repair of the meniscus would be attempted or trimming of the meniscus would be performed under arthroscope. The next step is then a post-operative rehabilitation program that is controlled by your treating physiotherapist.

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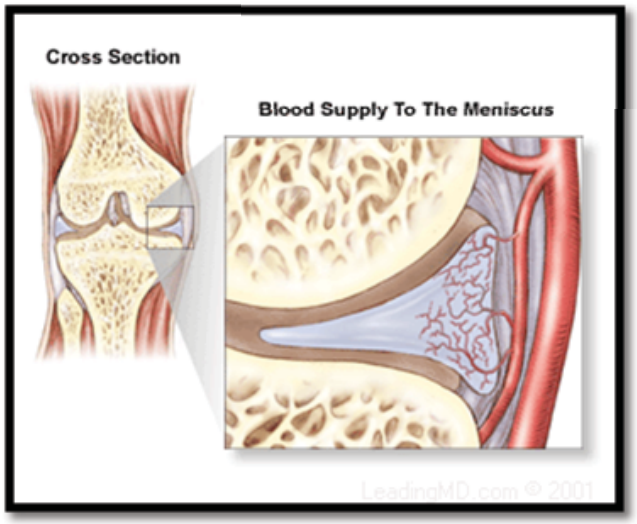
Recovery Time

Recovery time for conservative managment is around 6-12 weeks depending on the severity of the tear. Rehabilitation post-operative is around the 8-12 week mark, but once again will be determined by the extent of the tear.

Prevention

Many of these injuries are preventable. Sports people in particular must be taught correct technique in landing and in changing direction. This is the last phase of rehabilitation and these exercises can be integrated easily into the sports person's training.



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