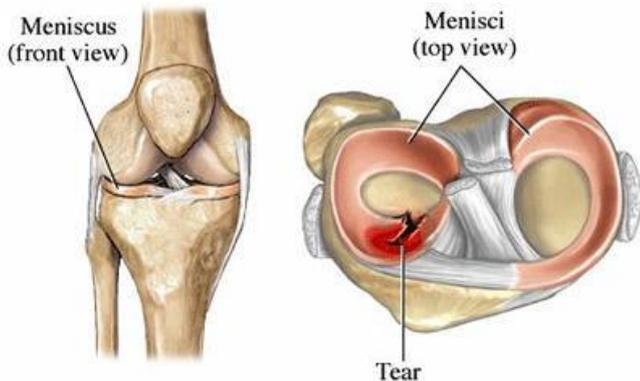


### INTRODUCTION

Meniscal injuries are common in sports (see Figure below). There are two menisci in the knee joint. Each meniscus is a roughly 'moon-shaped' pad and they lie beside each other on the top surface of the tibia (shin bone). They act to provide shock-absorption and reduce friction between the tibia and the femur (thigh bone).



**Figure 1** Meniscal tear

### OCCURENCE

Commonly occurs when the foot is planted on the ground and the knee is twisted at the same time, intentionally or due to a tackle. This injury does not have to occur at speed as the mechanism of twisting while the joint is weight bearing can cause the meniscus to get trapped between the bones and pinched. If the force is sufficient, a meniscus tear may result. Tears are more common of the medial (inside) meniscus than the lateral (outside) meniscus and the medial meniscus MAY have better repairing qualities. A meniscal tear may settle conservatively without giving many problems. If a tear does not heal,

a 'flap' of cartilage MAY interfere with the normal mechanics of the joint and interfere with movement.

### Signs and Symptoms

*Commonly at the time of injury the player MAY (but not always):*

- ✦ experience no symptoms at all
- ✦ feel pain (mild to severe)
- ✦ feel a 'tearing' sensation
- ✦ feel the knee 'locks' During the days after the incident there MAY be (but not always):
- ✦ increased swelling
- ✦ increased pain
- ✦ restrictions in range of movement
- ✦ noticeable 'locking' and 'unlocking' or 'clicking' of the knee on certain
- ✦ movements like standing up, kneeling, squatting etc.
- ✦ a feeling of the knee being unstable

### Diagnosis

A physiotherapist or doctor will look for various signs and go through clinical tests to establish if there is damage to either meniscus. Results can be confirmed by an MRI scan. If a meniscal tear is established the player may need to be referred to an orthopaedic consultant to discuss their treatment options.

### MANAGEMENT

On some occasions, depending on the location and type of the tear, the initial acute symptoms settle



down and with conservative treatment normal activity can be resumed. If however, a meniscal tear is interfering with the joint mechanics and symptoms persist then surgery is likely to be indicated to stabilise or remove the tear. Regardless of the severity of the meniscal injury the initial treatment is to reduce pain and swelling with PRICE (see ACL injury).

The conservative approach to treatment, which may take 6-8+ weeks, usually consists of a program containing the following elements:

- ✦ gait re-education
- ✦ bracing
  - ✦ manual therapy and stretches to regain range of movement
- ✦ electrotherapy for pain and increased healing
- ✦ a strengthening program including lower limb, core stability and upper body conditioning
- ✦ lower limb flexibility (stretching)
- ✦ balance program
- ✦ low weight bearing cardiovascular program (static cycling) progressing to full weight bearing activities like walking – jogging – running etc.
- ✦ plyometric program
- ✦ Sports specific skills (in the later stage of rehabilitation (6-8 weeks) e.g. sprinting, twisting, turning, cutting, ball skills, etc...

## Meniscal Surgery

Ideally if an athlete is due to have meniscal surgery specific rehabilitation, dependant on the injury, should commence prior to the procedure i.e. Prehabilitation (see ACL injury). Surgery is carried out arthroscopically (keyhole surgery) where the surgeon inserts devices into the knee through small incisions and either shaves down/smoothes out, removes or stitches up the meniscal tear. Normally this procedure is performed as a day surgery.

## REHABILITATION

Depending on the severity of the damage the rehabilitation process may take from 4-12 weeks. Small meniscal tears (commonly medial tears) will often lead to a quicker rehabilitation period than a more complicated tear, especially if the lateral meniscus is injured. The presence of damage to other structures (medial or lateral ligaments, ACL damage, bone damage etc.) will require a longer rehabilitation process. If the meniscus requires stitches the athlete may be required to wear a brace postoperatively to limit the range of movement of the knee and protect the stitches. A brace will also provide a degree of stability to the knee. Generally rehabilitation after meniscal surgery will follow the same pattern as with conservative rehabilitation but progress through the stages may be slower.

## RETURN TO SPORT (4-12 WEEKS)

In order to return to match play the player must be able to sprint, accelerate, decelerate, change direction at pace, jump and land on operated leg,

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solo, kick (from hands and the ground) and tackle comfortably without adverse reaction at the knee.