

Your Complete Guide to Meniscus Injuries

Getting you back on your feet



eBook



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Introduction

Meniscus injuries are the most common type of injury to the knee. There are several different types of meniscus injury which may require different treatment. Meniscus injuries commonly happen playing sport, but are also common with other activities.

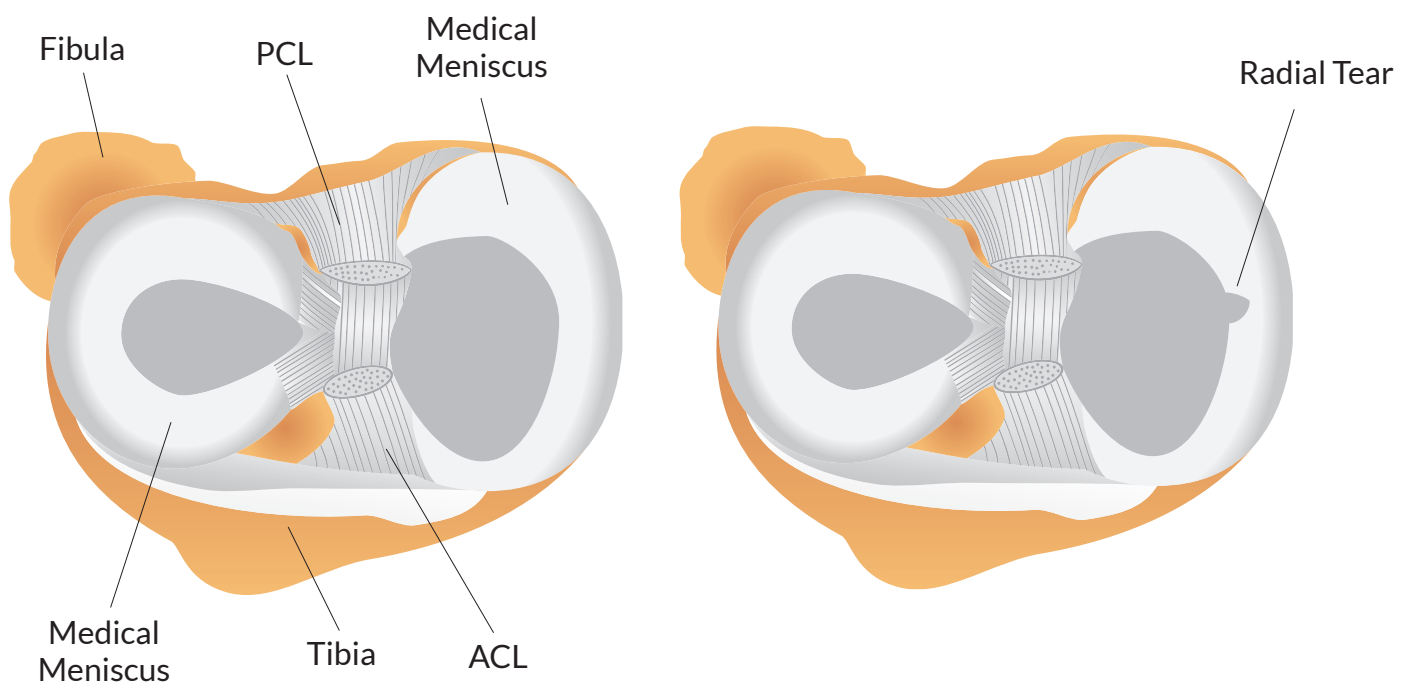
The treatment can vary from needing nothing to physiotherapy to surgery depending on the type and severity of meniscal injury. Regardless of the type of meniscus injury and the treatment required most people will return to full normal knee function or close to it after treatment.



What is the Meniscus?

The meniscus is a cartilage structure inside your knee. In fact, there are 2 menisci in your knee. A medial meniscus (on the inside part of the knee) and a lateral meniscus (on the outside part of the knee).

There are different types of cartilage inside your knee which serve different purposes. The articular cartilage is a very smooth cartilage which covers the ends of the bones in a thin layer and allows a smooth surface for movement. The meniscus sits between the articular cartilage of the femur (thigh bone) and tibia (shin bone).



The meniscus is made of a much tougher type of cartilage than the articular cartilage called fibrocartilage. Each meniscus is a C shaped disk and sits between the ends of the bones. Each meniscus has a posterior horn, a body and an anterior horn.

The two menisci in your knee serve a number of functions:






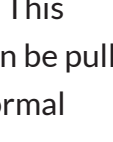
- Act as a shock absorber by evenly distributing the force of the round end of the femur (thigh bone) on the flat top of the tibia (Shin bone)
- Help the ligaments to keep the knee stable
- Help with nutrition of the articular cartilage

If one of the menisci in your knee is injured it can lose its protective function and increase the risk of other damage to your knee.

Types of Meniscus Injuries

Meniscus injuries can be categorised as either degenerative or traumatic. Degenerative tears are due to long term wear and tear and develop over a long period of time. Traumatic tears occur suddenly and are due to a specific identifiable injury. Meniscus tears can also be classified based on the shape or pattern of the tear. Common types are cleavage tears, radial tears, parrot beak tears, bucket handle tears, complex tears and meniscal root tears.

Cleavage or horizontal tears occur when the meniscus is split in a horizontal fashion splitting the meniscus into an upper and a lower part. They can be traumatic or degenerative and may be painful or have no symptoms. They may be associated with flap tears if either the upper or lower part tears further creating a loose flap of meniscus.

- A radial tear is when the meniscus is split vertically from the middle towards the edge a bit like the spoke of a wheel. This type of tear disrupts the normal function of the meniscus and will usually be associated with symptoms. 
- A parrot beak tear occurs when a flap of the inner edge of the meniscus tears free. The flap remains attached at one end. This loose flap of cartilage can get caught between the ends of the bone causing symptoms. 
- A peripheral tear is when the meniscus tears in a C shape parallel to the shape of the meniscus. If a peripheral tear remains un-displaced it may not cause pain and may not interfere with the normal function of the meniscus. 
- A bucket handle tear is when a large radial tear becomes displaced by folding forward on itself and getting jammed in the knee joint. This is usually very painful and may stop the knee from being able to move. 
- Complex tears are when there is a combination of different tear patterns or significant fraying of the meniscus without a specific identifiable pattern. These are often associated with degenerative disease of the knee such as osteoarthritis. 
- A meniscal root tear is when the attachment of the meniscus pulls off the bone. This usually occurs at the back or posterior root. Sometimes a small piece of bone can be pulled off the bone with the meniscus. This type of tear severely interferes with the normal functions of the meniscus. 

How do Meniscus Injuries Occur?

Meniscus injuries can occur in a number of different ways. They can be due to long term degeneration or due to acute traumatic injury. They can happen commonly when playing sport, at work or even in day to day life. Meniscal tears can also occur in isolation or they can be associated with other injuries of the knee such as knee ligament injuries.

Degenerative tears are very common in middle aged and older people. Over 50% of people will develop degenerative meniscus tears in their lifetime. This type of tear may be considered a normal part of aging or may be part of developing osteoarthritis of the knee.

Traumatic meniscus tears are often thought of as being a sporting injury. It is true that these injuries are common in sport, but you don't necessarily have to be playing sport to injure your meniscus. Meniscus injuries are equally common in those performing physical work and can even happen in day to day life.

The most common way to tear a meniscus is have a twisting injury of the knee. A twisting injury is most likely to cause a meniscal tear if the knee is bent and bearing weight at the time. This could be in a football tackle, stumbling on a step or gutter or lifting a heavy load from a squat.



Meniscus tears can happen along with other injuries to the knee. The most common is to suffer a meniscus tear at the same time as a tear of the anterior cruciate ligament (ACL). This is a very common sports injury. An old untreated ligament injury also greatly increases the risk of tearing a meniscus.

Certain types of broken bone can also be associated with a meniscal tear. A break of the upper end of the tibia (shin bone), known as a tibial plateau fracture commonly will have a torn meniscus as well.



What are the Symptoms of Meniscus Injury?

The symptoms of a meniscus injury depend on the type and severity of tear. Over time the symptoms may get better and go away or they may persist and get worse.

Pain is the most common symptom associated with meniscus tear. There is usually sudden, severe pain at the time a meniscus tear occurs. This may settle with time but there is often replaced by sharp, intermittent, catching pains or ongoing aching pain.

Swelling is another very common sign with meniscus tears. This swelling can occur immediately after injury or can develop more slowly over hours or days. The swelling may go down with time but it may re-occur intermittently. This intermittent swelling is commonly associated with catching pains as the torn meniscus is caught between the bones.

Large tears may get caught between the bones of the knee and prevents the knee from being able to be straightened all the way. This is known as locking and is particularly common and severe with bucket handle type tears. Sometimes this accompanied by sudden unlocking when the torn meniscus moves out of the way allowing the knee to move normally again.

Degenerative tears very commonly have no symptoms or they may have any combination of the symptoms traumatic tears.

What Sports/Activities Put me at More Risk of Meniscus Injury?

Any kind of sport or strenuous physical activity can lead to a meniscus tear but some activities are higher risk than others.

Contact sports such as rugby, Australian rules football and soccer are probably the highest risk for meniscal tears. This is due to the risk of impact forcing the knee into an abnormal position.

Sports which require sudden stopping, twisting or turning have significant risk of meniscus and other knee injuries. The most common mechanism for a meniscus tear is twisting on a loaded knee which can easily happen during these activities

Jumping sports such as netball and basketball have high risk of injuries to the meniscus. This is particularly the case if trying to change direction or stop when landing.

What Can You do to Prevent Meniscus Injury?

Although you can never completely protect against meniscal injury there are a number of things you can do to reduce the risk

- Undertaking appropriate training prior to competition to ensure adequate fitness and strength
- Gradually increasing intensity and duration of training
- Avoiding activities that cause pain
- Allowing adequate recovery time between sessions
- Wearing appropriate protective equipment and shoes
- Undertaking sport specific prevention programs such as jumping and landing techniques
- Checking the sporting or work environment for hazards
- Warming up before competing





Treatment Options

Like symptoms, the treatment may depend on the type and severity of the tear. A degenerative meniscus tear may need no treatment at all.

For traumatic tears, immediate treatment is the same as any injury with rest, ice, compression and elevation. Once the immediate injury has settled it should be assessed by a doctor or physiotherapist and an x-ray or MRI may be ordered as part of the assessment.

If the tear is relatively minor it may be appropriate to rehabilitate the knee with physiotherapy and anti-inflammatory medication in the first instance. If the symptoms get better with this gradual return to activity should be trialed and no further treatment may be needed.

For more severe types of tears such as bucket handle tears or meniscal root tears or if symptoms don't start to get better, surgery may be needed. Surgery for meniscus injuries is usually performed using arthroscopy, which is a keyhole surgery. This is usually done as day surgery meaning you come in to hospital to have the operation done and go home on the same day.

In the past surgery for meniscal injuries meant removing the whole of the injured meniscus. These days surgeons try to save as much of the meniscus as possible either by repairing the tear or removing only the torn part of the meniscus.

Unfortunately only a small percentage of meniscus tears are able to be repaired. The cartilage of the meniscus has very little blood supply which means it often doesn't heal. Even when a meniscus tear can be repaired there is a high chance of the meniscus tearing again because of this poor healing. Repair of a meniscal tear is usually only possible shortly after injury so it is important to have your injury assessed early.



Recovery From Surgery

The recovery from surgery for meniscus tear will depend on whether the meniscus has been repaired or the torn part has been taken out. Either way, physiotherapy is likely to play a big part in the recovery from surgery.

Most commonly the torn part of the meniscus will have been removed rather than a repair carried out. In this case usually you will walk out of hospital with no need for crutches. You will need to take things easy for a few days but most people are back to work a week or two after this kind of surgery. It will take a couple of months for the knee to return to full normal function.

If the meniscus tear is able to be repaired the recovery will be longer but it is worth it in the long term to preserve the function of the meniscus. You will need to be in a brace for 6 weeks. This is to limit the amount your knee can bend. You may also be required to use crutches for 6 weeks to protect the repair. After this 6 weeks you will need physiotherapy for at least a further 6 weeks to rehabilitate the knee.

Your physiotherapist will work with you to get your walking back to normal, regain the strength of the muscles around your knee and regain the full normal range of movement.

Recovery From Surgery

Meniscus injuries are extremely common but treated well will usually have a very good outcome.

The treatment required will depend on the type and severity of meniscus injury you suffer. It is important to get early expert advice to make sure you get appropriate treatment for your meniscus injury whether that be physiotherapy or surgery.





CALL DR. MACKENZIE TODAY

For a consultation or if you have any further questions about the surgery
please call **(02) 4963 3393**



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