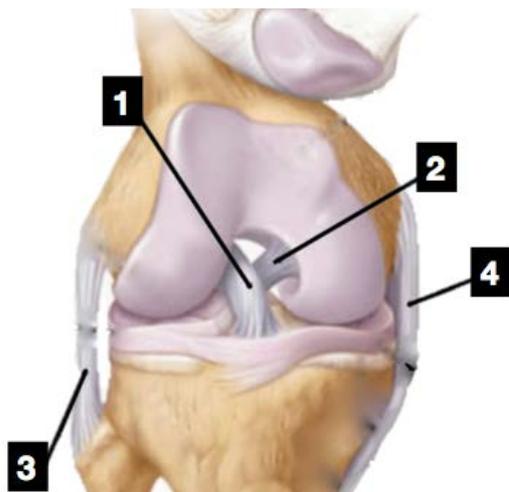


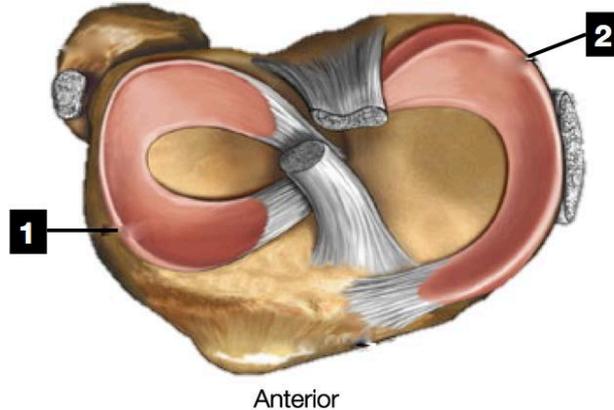
**MENISCAL TEAR OF THE KNEE**

The menisci are two C-shaped fibrocartilage pads that sit between the two bones of the knee. They are critical for the long-term health and function of the knee. The menisci function as shock absorbers and stabilizers of the knee and protect the articular cartilage from excessive stresses. Because they sit between the two bone ends, the menisci are subject to significant forces and can sometimes be torn.

When you tear your meniscus, the loose torn portion can catch between the bone ends, this causes clicking, catching sensations, pain, swelling and sometimes giving way of the knee. If it gets jammed, it can cause the knee to “lock” in a bent position, without being able to be straightened.



1. Anterior cruciate ligament 2. Posterior cruciate ligament  
3. Medial collateral ligament 4. Lateral collateral ligament

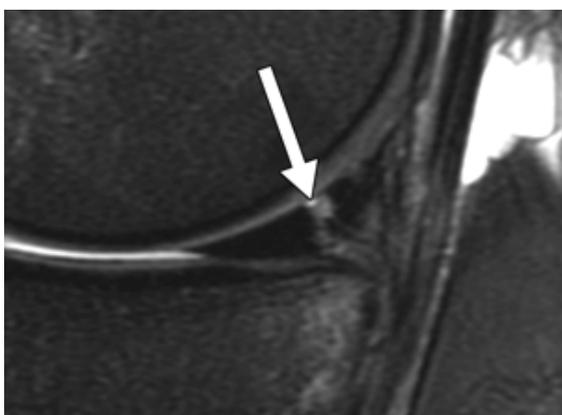


1. Lateral meniscus 2. Medial meniscus

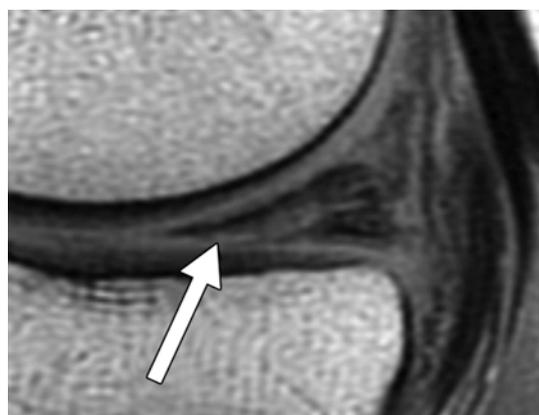
The menisci can be injured in many ways. In younger people, a combined loading and twisting of the knee is the most common mechanism. Meniscal tears occur in over 50% of people when they tear their anterior cruciate ligament (ACL). In older people the meniscus can tear with no traumatic event as the result of degenerative changes.

A description of your injury and subsequent symptoms are often enough to strongly suspect a meniscal tear. Examination can often confirm the diagnosis, without need for special imaging.

X-rays are routinely performed, but are most often normal. An MRI scan will often be used to diagnose a meniscal tear and may also be used to determine the presence of other injured structures. On MRI, a meniscus should appear as a solid black triangle, light colour indicates damage to the meniscus.



Peripheral vertical tear (reparable)



Complex tear (usually irreparable)



## HOW IS A MENISCAL TEAR TREATED?

Treatment of meniscal tears is individualized depending on several factors. The symptoms relating to a smaller meniscal tears frequently settle without surgical intervention. In some cases, meniscal tears will heal by themselves, without the need for intervention.

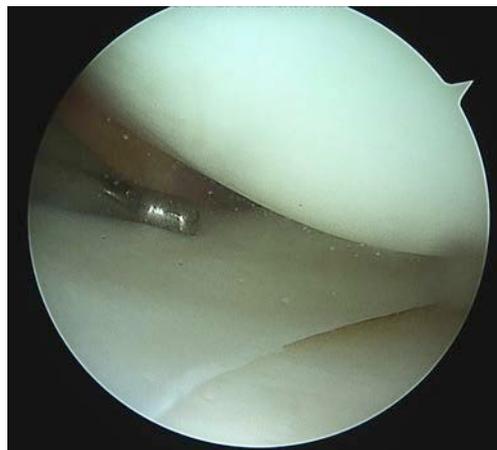
However larger traumatic tears, those causing a locked knee, or those with ongoing symptoms require surgical treatment.

Most meniscal tears are treated arthroscopically, with the aim of repairing the meniscus whenever possible. This is performed with sutures or meniscal fixation devices and may require additional incision on the inside or outside of the knee.

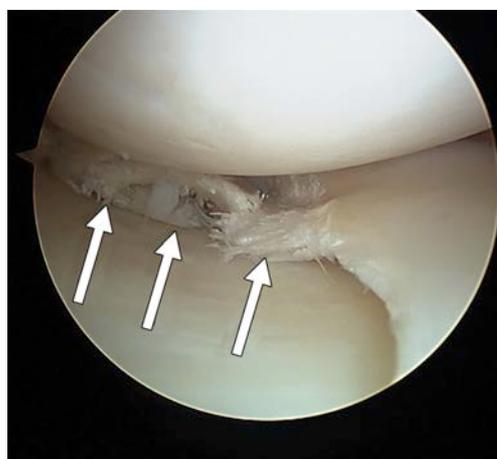
Unfortunately, the meniscus has a limited ability to heal owing to its poor blood supply. Because of this, *only about 10 - 20% of meniscal tears are actually repairable.*

Repairable tears are more common in younger patients, in whom the consequences of loss of a meniscus are much greater. Most specialist knee surgeons would now agree that an attempt at meniscal repair should be made whenever appropriate.

In cases where repair is not possible, removal of the torn meniscal tissue, while preserving as much meniscus as possible, is performed. At present, there is no reliable meniscal replacement, although allograft meniscal transplantation may offer a promising alternative in the future.

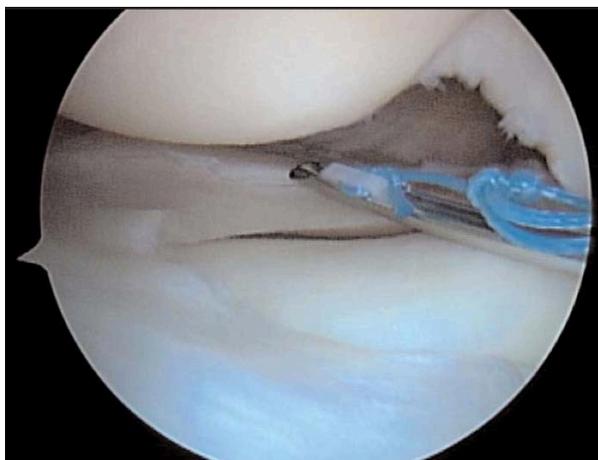


Normal meniscus

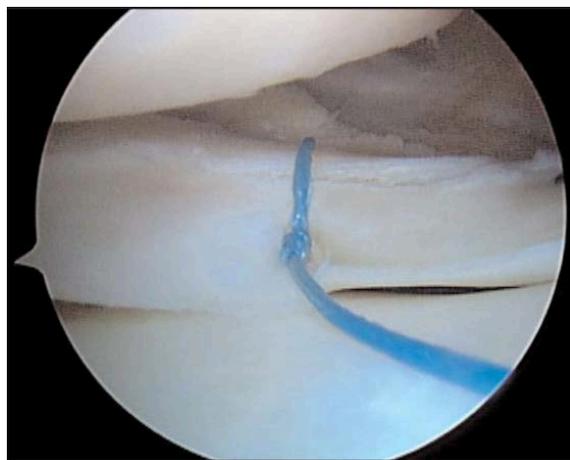


Complex tear (irreparable)

Meniscus repair is carried out by carefully abrading the edges of the meniscal tear to promote healing, then placing one or more sutures across the tear with a special suture passing instrument. These sutures hold the tear together while the healing occurs. It is important to avoid placing stress on the repair while it is healing, as the sutures can fail or pull through the healing tissue. Your rehabilitation program will be tailored to guide what you can and can't do.



Vertical tear with meniscal repair device placing sutures



Repair with suture in place



### WHAT IS THE EXPECTED OUTCOME FROM MENISCAL SURGERY?

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Most meniscal symptoms are reliably resolved with meniscectomy. However, the menisci are necessary for the long-term health of the knee and meniscectomy raises the risk of degenerative wear and tear on the joint in the long-term.

Specific risks associated with meniscal repair surgery include:

- *Failure to heal (10-30%):*  
Healing rates with meniscal repair are between 70-90% depending on the site and pattern of the tear. If a repaired tear fails to heal, symptoms may recur, making a second arthroscopy necessary to remove the torn portion. This occurs in less than 5% of patients.
- *Stiffness (5-10%):*  
Knee arthroscopy can be associated with stiffness in 5-10% of patients. After surgery you will have a rehabilitation program to minimize the chances of this occurring. Rarely, a manipulation under anaesthesia or repeat arthroscopy is required to release scarring.
- *Soft tissue irritation (uncommon, <5%):*  
Meniscal repair devices can sometimes cause some mild irritation on the side of the knee where the repair has been performed. Usually this goes away by itself, rarely a steroid injection or removal of the anchor is required once the meniscus has healed.
- *Minor skin nerve injury (5-10%):*  
Extra incisions are sometimes required on the inner or outer aspect of the knee where repair sutures are placed in order to protect the underlying nerves and blood vessels. The incision on the inner aspect of the knee can be associated with an area of numbness on the inner aspect of the leg due to damage to one of the fine nerve branches in the area.
- *Significant nerve or blood vessel damage (rare):*  
Damage to the major nerves or blood vessels in the leg has been reported with meniscal repair, but is exceedingly rare with modern techniques of repair.

### WHEN CAN I RETURN TO WORK OR SPORT?

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#### *Meniscectomy:*

Rehabilitation and strengthening can commence immediately. Some patients report being out gardening within 24 hours (which I don't recommend). Usually you can return to sedentary work or driving within 2-3 days. Light to medium duties within 1-2 weeks and heavier work or sports with 6 weeks or so, depending on progress.

#### *Meniscal repair:*

If a large meniscal repair is carried out, your knee is braced in a splint for 2 or more weeks, using crutches for protected weight-bearing. You will undergo a graduated rehabilitation process. Returning to sedentary work can usually occur after 1-2 weeks. The rate of progression through the remainder of the rehab process depends a number of factors, most importantly, the pattern and location of the tear and how sturdy the repair is. More complex and serious tears are progressed more slowly than simple, stable tear patterns.

*It takes 12 weeks for the repaired meniscus to regain 80% of the strength of the normal meniscus.*

In general most patients are returning to normal walking or light physical work after 4-6 weeks, with a return to manual labour after 10-12 weeks. Any activities that involve loaded deep knee bending (eg squats) or pivoting must be avoided for a minimum of 3 months. Return to pivoting or cutting activities, such as playing rugby or netball, requires a minimum of 5-6 months for healing and rehabilitation.