

Arthroscopic Meniscectomy

Camera controlled keyhole surgery of the knee is performed for many reasons, the most common being a torn cartilage. There is some interesting press at the moment about the value of arthroscopy in patients over 55 years of age. This brochure assumes the knee is NOT grossly degenerative, or arthritic. Just because some people are over 55 doesn't mean they have arthritis, and a plain XR usually can tell.

Cartilage is the common name for the meniscus.

The meniscus is a piece fibrous tissue or cartilage in the knee. There are two of them. They are "C" shaped view from above, and triangular in cross section. When pressure is placed through the knee – be it walking, jumping, or squatting, the cartilage reduces the force on the joint surface, protecting it from damage over the years. Confusingly, another form of cartilage is in the joint provides the surface of the bones.

Why does the meniscus tear?

In young people, usually a significant injury occurred, typically in sport. In older people, the cartilages seem to behave more like old rubber, and more easily split. The forces in heavy people are higher. Some people have bow legs or knock knees, and this increases the force on one of the cartilages.



Figure 1. Arthroscopic image of a cartilage infolded fragment under the ligament. When the fragment moves, the symptoms change from night pain to locking. The knee is unpredictable. In this image, a 2mm diameter probe is being used to bring the fragment out of the infolded position.

What trouble does a torn cartilage cause?

Pain, locking, jamming, swelling of the knee can occur, the larger the tear, the more the trouble. The knee could be unreliable, you might not be able to trust the knee. It may prevent sport or cause pain in bed at night.

Sometimes a cyst (a swelling) arises from a torn cartilage on the outer (lateral) aspect of the knee, rarely on the inside (medial).

Ultimately, the injury or underlying factor that caused the torn cartilage will cause the knee to become arthritic. This process usually takes decades if the leg is well aligned and patient normal weight.



Figure 2. Same knee, torn fragment flipped out. The tool being used trims the unstable fragment of cartilage. A variety of tools are used for different location tears.

Is it possible to repair the meniscus?

Sometimes. Perhaps < 10% of tears are suitable for repair – sporting injuries where ligaments are also injured where surgery also includes for instance cruciate ligament reconstruction generally do well. Other repairs are generally major surgery requiring time on crutches. If it seems unlikely a repair will be successful, it is safer to remove the troublesome torn cartilage.

What does the knee feel like with part of the meniscus removed?

Initially note quite feel right, but much better without the pain of the torn fragment being jammed or flicking in and . We know that taking even some cartilage out will contribute to arthritis 30 years later. In the interim, the knee should no longer lock or jam, night pain should stop, and be improved in sport and squatting.

Should I have an MRI first?

MRI is a useful tool especially for unusual cases, where the bone might be involved or XR didn't provide enough information. The arthroscopy is extremely accurate inside the joint. In some patients it may make better sense to just get on with the surgery.

What anaesthetic?

Most standard arthroscopic surgery is done as day surgery under **general anaesthesia**. A standard requirement is you will be not be alone in the first day and night after the surgery to ensure you will be safe. You may not drive or make business decisions after the drugs we use for this anaesthetic.

Local anaesthetic is a legitimate alternative. For straight forward cases, patients can watch the operation on a video screen. You will feel some things – a needle and anaesthetic will be put in to any area that surgery will be done. An anaesthetist will be present in case you need light sedation.

How is the surgery done?

The leg is painted with a pink antiseptic (chlorhexidine), which is more effective than administering antibiotics. Usually two small incisions are made to allow the camera and whatever tools are required to be inserted in the knee. Surgery to remove some torn cartilage usually takes 20 minutes or so, but the time at the hospital is more like two hours. Usually the patient is able to walk without crutches afterwards.

What happens after the surgery?

Typically, within an hour or two after the surgery, the anaesthetic will have worn off and, you will be able to go home. You will not be able to drive yourself home, and until the following day not make any business or important decisions. An instruction sheet and summary of the surgery will be provided.

Tablets

You will probably need some painkillers when the local anaesthetic wears off – eg Tramal. Anti-inflammatory tablets (eg Voltaren or Mobic) are prescribed to help settle the joint inflammation down. If there is no pain, then the tablets are not needed. About half our patients benefit from using anti-inflammatories for a week or so.

Bandaging

The knee will have a bandage on it. The bandage is removed after three days. It can be replaced if it is uncomfortable or falling off. An elastic knee brace or tubigrip may help control any swelling.

Wound dressings

Under the bandage are small plastic dressings. These usually stay on until reviewed in the rooms. They are waterproof – after showering they should be “patted” dry. What are the risks of arthroscopy?

Physiotherapy

Physiotherapy is valuable for athletes and others trying to get to full function as soon as possible. For those not wishing to do physiotherapy, there is value in doing some work on an exercise bike, and stretching exercises on the hamstrings and quadriceps.

Next appointment with your surgeon

A review appointment with your surgeon is made for typically 10-12 days after the surgery to remove sutures, discuss findings, discuss future plans, and whether further medications or physiotherapy is required.

First Six Weeks

The small incisions (portals) will heal by one week. Swelling then occurs, like a pea under the skin because 4-5 separate layers each develop their own patch of thick scar tissue. This eventually smooths out again, but while the scar tissue is increasing it is tender to kneel on.

Urgent problems after surgery

It may be necessary to attend an emergency department such as at St John of God Ballarat. If you are not sure, in hours phone the consulting rooms. Out of hours, contact your surgeon on his mobile phone, or SJG emergency department on 5320 2127.

Things that can go wrong.

Tenderness and swelling

Tenderness around the scars is common, and can make kneeling difficult for up to six weeks (although usually it is less than this). The portals get an area of swelling like a pea under the skin maximal at six weeks.

Numbness

A small numb area over the front of the knee can occur. With time these areas of numbness usually becoming smaller. Large areas are rare, more likely in complex surgery requiring additional portals.

Haemarthroses & pain

Bleeding into the knee after the surgery occurs in 1% of patients. It slows down recovery, requires crutches and creates an annoyance for you. Occasionally the swelling is dramatic enough to require re-operation.

Infection

Infection after knee arthroscopy is said to occur in one in 600 patients. It would make you unwell, re-admission to hospital for at least a week and further surgery (possibly even open surgery) may be required.

Failure to find the problem

This rarely occurs, but a torn cartilage may not be apparent or a loose body not found. Some knee problems are not inside the knee joint, for instance tight hamstrings, problems in the femur or hip arthritis may cause knee pain. Direct blows to the front of the knee damage structures apart from the inside of the knee. If symptoms persist, an MRI or other tests may be used to help identify the problem.

DVT & Pulmonary embolism

Blood clots can occur in the leg and migrate into the lung- approximately 1 in 20 000. Patients most at risk have a personal or family history of this problem and should tell their surgeon so additional precautions can be taken.

Pain

Minor pain requiring tablets is common in the first few days. Unusual pain may

indicate a problem. In the first instances, take the prescribed tablets and use an ice pack. If it is not settling contact your surgeon.

Exacerbation of pain.

Fibromyalgia is an uncommon pain problem and sufferers often find that surgery exacerbates that pain. We can do better if you tell us before surgery. Another group of patients at risk are those with osteoarthritis, which sometimes appears mild on the x-ray but may turn out to be the predominant problem.

Other rare complications

There is no absolute limit to complications of surgery and anaesthesia. For instance I have heard of a case of popliteal artery injury requiring limb salvage surgery, compartment syndrome after arthroscopic fracture repair, and other complex surgery has been seen.

What if arthroscopy doesn't fix the problem?

If the forces in the knee are unusual, the cause of the torn cartilage will still cause knee pain. For instance bow legs overloads the inner aspect of the knee. There are alternate solutions available, in young patients we realign the leg and fix the overload, where as older people may need a partial or total knee replacement. Knee cap complaints can be confused with torn cartilage at times.

In general, if surgery isn't successful, the patient and surgeon meet again, some further tests undertaken, and the risk-benefit ratio for further intervention considered.

I've had an arthroscopy before, can I have another?

Yes but why do you need one? If the problem in the knee was different last time, then it makes sense. If the knee is developing arthritis, then arthroscopy may not achieve anything. These decisions are made on a case by case basis, ensure your surgeon knows this knee has had previous surgery.

Checklist prior to surgery

- Have you advised your surgeon of significant medical history?
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- Tell your surgeon about blood thinners such as Warfarin, Iscover, Plavix, Aspirin
-
- Tell your surgeon about unusual pain responses in the past – eg Fibromyalgia
-
- Tell your surgeon about previous operations or injuries to the knee
-
- Tell your surgeon about any allergies
-
- Submit hospital paperwork
-
- Do you have any infections in your body? If one develops prior to surgery, please telephone your surgeon.
-
- Arrange a driver to take you home
-
- A magazine to read whilst waiting
-
- Do you know when to fast from? (You cannot eat for at least 6 hours prior to surgery, and only drink CLEAR fluids up until two hours before you were told to be at the hospital)
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- Is a medical certificate required? Telling the surgeon prior to the operation will ensure the correct certificate type (eg Work Cover, TAC, Carers Certificates).

Cost of knee arthroscopy

Health Insurance generally pays for most of the hospital expense, but only covers a fraction of the doctors' fees. This is because Medicare hasn't adjusted their schedule to match CPI since 1983, or at all since 2014, Medicare is now worth less than one third of the real value of 1983. So there will be out of pocket expenses for doctors.

Doctors involved in the operation are: the surgeon, anaesthetist, surgical assistant, and if any medical problems occur, or are anticipated, a physician. The surgical assistant is a skilled nurse, doctor, or surgeon working alongside your main surgeon. The surgical assistant's billing will occur through Ballarat OSM. Typically there will be an out of pocket expense which contributing to paying the salary or fee of the the assistants. Typical out of pocket expense after Medicare & private health insurance rebates (estimates) are \$500 for hospital, \$400 for anaesthetist, and \$200 for surgical assistant.

Included in the **surgeon's fee** is performing the surgery, follow-up in the hospital and consulting rooms for three months. The surgeon takes personal responsibility for the post-operative pain control –including extensive local anaesthetic infiltration around the wounds. For patients off track, the surgeon intervenes, or supervises interventions. The surgeon takes personal responsibility for achieving a low infection rate. If an infection does occur, aggressive surgical and antibiotic treatment is required.

The AMA calculates annually the change in cost of medical practice, covering practice staff, insurance, rent etc, which roughly follows the CPI. Following the AMA fee suggestion, the surgeon's fee for normal knee arthroscopies is **\$2225** (item number 49561).

Insurers are only required by law to pay \$171 towards the surgeon, Medicare pays \$513, thus you're \$1551 out of pocket for the surgeon. Insurers require us to discount more than 50% to allow "Gapcover" arrangements, and 33% with out of pocket expenses, so we generally don't use their fee structure, but the AMA. BUPA + OPE pays "close enough" in straight forward cases.

ESTIMATED OUT OF POCKET FEES - based on 49561

ESTIMATED	BUPA	Other Insurance	Medicare only	No Medicare
Surgeon	\$ 500	\$ 1,078	\$ 1,720	\$ 2,225
Total	\$1,700	\$ 2,200	\$ 4,400	\$ 5,300

If you are experiencing personal financial hardship, please discuss this well prior to the surgery so an amicable arrangement can be made. Note that most our joint replacements patients are elderly and many have a part pension. The out of pocket expenses will be required to be paid two weeks prior to surgery to avoid cancellation.

Knee meniscectomy. v6.0
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