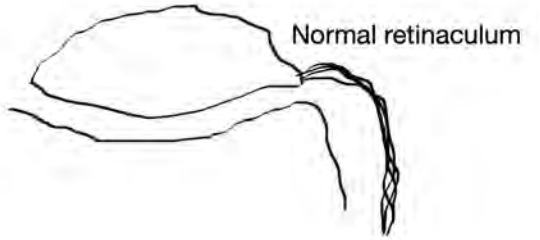
# Knee Arthroscopy and Lateral Release

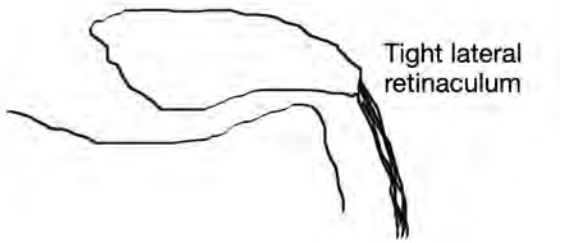
## Excess lateral patella pressure syndrome.

In a normally functioning knee, the kneecap (patella) is exposed to forces some 9 times the body weight with normal activities - eg climbing stairs and getting out of a chair. These forces are higher again with sporting activities.




The lateral retinaculum provides a "check reign" to avoid the kneecap moving too far from its normal position.

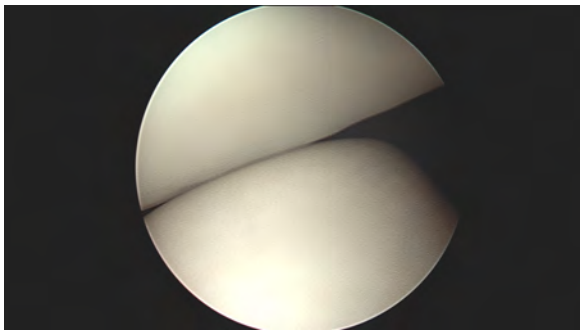
If the kneecap isn't "tracking normally" in the groove in the front of the femur (the trochlear) then the forces are higher again. Physiotherapy, ITB stretching, taping, and VMO strengthening carry a 90% cure rate - so most patients need physiotherapy, not surgery. The VMO is a muscle on the inner aspect of the knee that usually helps keep the kneecap in place. If it becomes weak, it needs to be strengthened.




The recalcitrant cases - where pain persists for months despite good physiotherapy - may be suitable for a minor operation - lateral release - lengthening the structure pulling the kneecap outwards, and thus spreading out the pressure on the kneecap.

## Open or arthroscopic release?

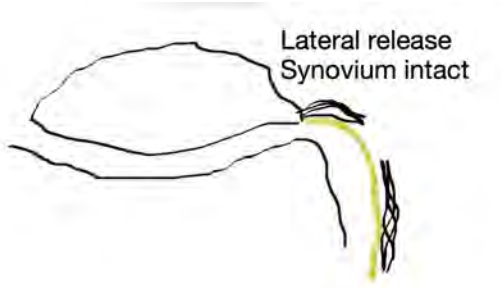
Arthroscopy is a useful component of the operation. Sometimes additional problems are found in the joint that need addressing. It is possible to confirm if the kneecap is actually pulled off the side of the groove.



In this image - the kneecap is at the top, femur lateral facet below, and the femur trochlear where the kneecap should be is to the left of the image.

Any damaged joint surface, or inflamed synovium may need to be removed.

Some surgeons will do a lateral release entirely arthroscopically. Others make an additional incision and release the retinaculum only, leaving the synovium (the inner layer of the joint capsule and blood vessels) intact. A new phrase for this old operation is a "fractional lengthening" of the lateral retinaculum




As a result of releasing the retinaculum, the kneecap resumes its normal position, with more normal forces applied to it.

After surgery, crutches may be required for a few days, and further physiotherapy will be required. It should be possible to work on the VMO exercises within three days, perhaps be on an exercise bike at a week, and resume sport by 4 weeks,

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## Clinical assessment by experienced patellofemoral surgeon is necessary

Lateral release was an overused operation in the 1980's for any pain at the front of the knee. It is important to identify which patients are actually experiencing instability of the kneecap - as lateral release in these patients can make things worse.

## 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.

Other conditions the MRI might show include "Hoffa Syndrome" - where the fat pad is swollen, or areas of bone marrow oedema, or rare unexpected differentials.

## 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 operations are possible, but unusual where an open lateral release is required. Spinal anaesthetic (where the anaesthetist puts a needle in the lower back) can be used, but the time at the hospital is longer, and there isn't usually an advantage.

## How is the surgery done?

The leg is painted with a pink antiseptic (chlorhexidine), which is more effective than administrating antibiotics. Usually two small incisions are made to allow the camera and whatever tools are required to be inserted in the knee. A separate incision on the side of the knee is often done to allow the fractional lengthening procedure. Surgery usually takes 20 - 30 minutes or so.

## 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 lateral release surgery, it is advisable to see your physiotherapist within three days of surgery.

*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.

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## 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 2126.

## Things that can go wrong.

*Tenderness and swelling*

Tenderness around the scars is common, and can make kneeling difficult for up to six week (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.

*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 fix the problem*

The success rate is around 90% of patients have total or reasonably good relief of their pain. Sometimes more damage to the kneecap has occurred than expected, and further, much larger surgery, can be considered.

*Instability of kneecap after lateral release*

This is a rare problem but worthy of discussion. The lateral retinaculum does contribute to patella stability. Its release is sometimes required as part of a stabilisation operation, but if done as an isolated procedure, can paradoxically make things worse. The experienced patellofemoral surgeons should rarely have this occur, but the cold hard reality is that it sometimes happens. In that case - further surgery to realign the kneecap will be required - it might be as simple as a medial patellofemoral ligament (MPFL) reconstruction, or more complex requiring the patella tendon attachment on the tibia to be moved, or the rotation of the femur corrected, in combination with other procedures.

*DVT & Pulmonary embolism*

Blood clots can occur in the leg and migrate into the lung- approximately 1in 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. Using a background of anti-inflammatory (eg Mobic or Voltaren, or Nurofen) and topping up with other drugs as necessary is the best. Ice packs often help as much as extra drugs. Unusual pain may indicate a problem. If it is not settling contact your surgeon.

*Keloid Scar*.

The scar on the outer aspect of the knee tends to broaden, and can even become heaped up. If important to you to avoid this, taping the scar for six to twelve weeks after surgery,

*Bizarrely rare complications*

There is no absolute limit to complications of surgery and anaesthesia. For instance cases of popliteal artery injury requiring limb salvage surgery, compartment syndrome and other complications.

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## Cost of knee arthroscopy & lateral release

Health Insurance generally pays for most of the hospital expense except for the "excess", 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 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). Some cases of arthroscopic surgery are use the item number 49560, others 49562 & 49563. Each has a different fee.

Insurers are only required by law to pay $171 towards the surgeon, Medicare pays $513, and thus you may be $1551 out of pocket for the surgeon. Insurers require us to discount more than 50% to allow "Gap cover" 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 straightforward 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. The out of pocket expenses will be required to be paid two weeks prior to surgery to avoid cancellation.

Lateral Release, v1.0
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