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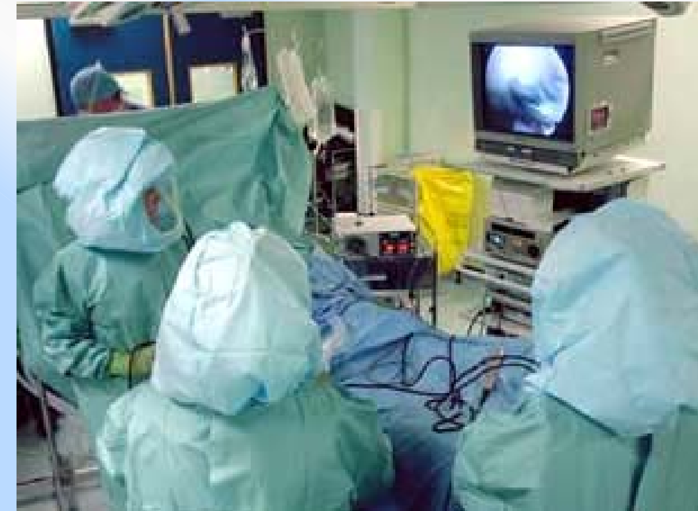
The Knee Foundation



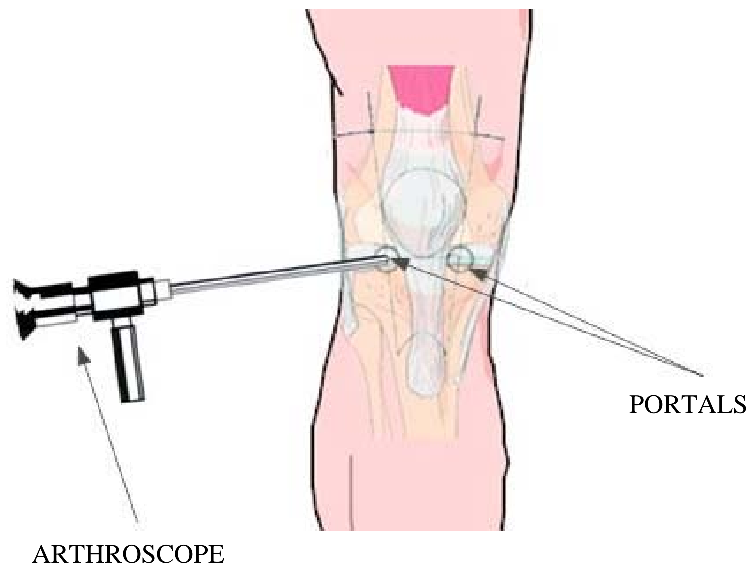
# KNEE ARTHROSCOPY

## WHAT IS AN ARTHROSCOPY

This is a 'keyhole' examination of a joint – Arthro means joint and the scope is a small tube measuring 5mm. which is inserted into the joint; it has an attached camera and light source. The scope and a small probe are introduced via small incisions called "portals". A comprehensive examination of the internal structures of the joint can be viewed on screen and recorded.

Originally, arthroscopy was used purely for diagnosis but now it is possible for extensive surgery, using a variety of instruments, to be performed through the portals. Recovery is usually much more rapid than that following "open" surgery but you must remember that recovery time is still dependant on the type of procedure performed.

Various problems can be dealt with arthroscopically and, in many cases, more than one procedure may be necessary. You will find an explanation of the most common procedures at the end of this pamphlet.



Knee Arthroscopy Training at The Knee Foundation

walking on steep slopes, squatting etc.) for the same period of time. Thereafter activity should be gradually increased but it is advisable to avoid too much stress if optimum healing is to take place. The physiotherapist will guide you and recommend exercises and activities which will promote rather than inhibit healing.

The damaged area will go on developing for months after surgery so it may be prudent to reconsider certain sporting activities. Your physiotherapist or surgeon will discuss the future prognosis regarding activity levels with you.

## Debridement and Synovectomy

The lining of the knee joint is called the "synovium", and often becomes inflamed as a response to injury or damage; In this situation, the joint can be very swollen, warm and tender. Chronic inflammation leads to thickening of the synovium, with possible entrapment between the joint surfaces. If this situation continues untreated, it eventually causes softening of the articular cartilage and progressive arthritic changes.

At arthroscopy, it may be necessary to trim or remove the thickened synovium and any loose debris found within the joint. Post-operatively there is likely to be some swelling and tenderness until the inflammation settles down, - you could be given anti-inflammatory tablets to aid this. The physiotherapist will advise you regarding the use of sticks or crutches, as appropriate, and will progress your exercises as and when necessary.

If you have any questions regarding your proposed operation or the rehabilitation which will follow, please do telephone and speak to the clinic nurse, a physiotherapist or doctor, who will be happy to help you.

## ***PRIOR TO YOUR OPERATION***

Your surgeon will explain the problem you have, how he will try to correct it, and he will answer any queries you have.

You will require physiotherapy after your operation, this is usually arranged at the Knee Clinic however, if you live too far away, you should try to find a chartered physiotherapist closer to home. It is useful to make preliminary contact with them before your admission.

Many minor arthroscopic procedures are now carried out on a 'day case' basis – this means that you would have your operation in the morning and would be able to go home later that day – usually late afternoon or early evening, after you have seen the surgeon and the physiotherapist.

You may be advised to stay in hospital for one night after your operation, this will depend on the extent of your surgery, the time of day of the surgery (you will have an anaesthetic to recover from) and possibly how far away you live. Generally the extra 12 hours in bed is beneficial. If your consultant feels it necessary he may ask you to stay for two nights.

## ***IN HOSPITAL***

You will be seen briefly on the ward, prior to your operation, by the anaesthetist and also the surgeon. The surgeon will mark your leg with a pen, will explain the procedure (he is also duty bound to inform you of possible complications) and will ask you to sign a consent form.

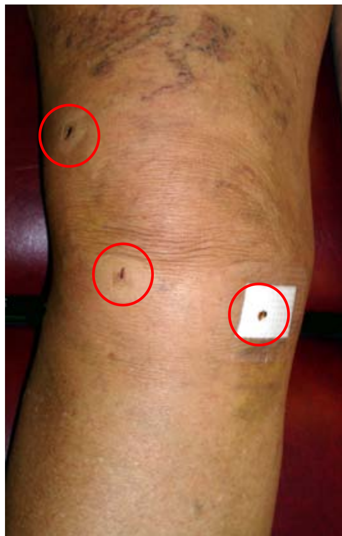
After an arthroscopic procedure it is common to have some swelling and discomfort, but this is usually minimal.

The physiotherapist will visit you on the ward. You will be shown exercises which you will be expected to practise regularly at home. If necessary you will be issued with sticks or crutches and taught how to use them correctly and safely, please note that the hospital will make a small charge for any walking aids which are issued, (if you already have sticks or crutches at home then please bring them with you on admission).

An appointment will be made for you to visit the physiotherapy department as an out-patient, this is usually 5-7 days after discharge (don't forget your shorts when you come!). If you live too far away to come to the clinic we will forward all the necessary details to your local physiotherapist.

***YOUR WOUNDS***

You will have three and four small incisions or "portals" through which the operative instruments are passed. These incisions are very small and do not usually require stitching. They will be covered with sterile dressings which should remain in place for approximately 7-10 days.

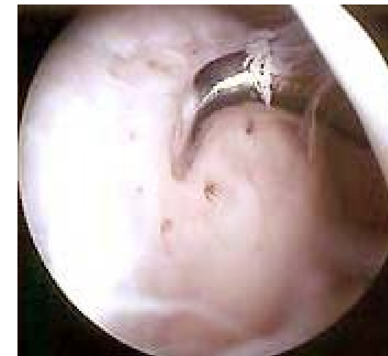


If you can keep these dressings dry, the wounds will heal quickly, - try to shower rather than bathe, and try covering the knee with clingfilm to keep most of the water off. If the dressings get damp, just leave them open to the air to dry out.

You will also have either a crepe bandage or white "T.E.D." stockings. These are to control swelling around the knee and should be worn until swelling has settled and you are walking normally without any aid.

**Microfracture / Abrasion Arthroplasty:**

If the damage in the joint is severe, a more radical procedure may be undertaken to stimulate some healing. This healing process does take a long time and it could be 9-12 weeks before everyday activities become completely comfortable. At operation the poor quality cartilage surrounding the lesion will be cleared thus leaving a 'crater' for want of a better description. The bottom of the crater is either abraided or drilled to produce bleeding of the underlying bone – this bleeding will form the basis for the development of new fibrocartilage. Although not as good as the original articular cartilage it is better than bare bone and hopefully will produce a more even joint surface.



During the early weeks of recovery the crater area is very fragile, the blood will have formed a clot but this can easily break up.

If the operation has been performed on a weight bearing part of the joint you will have to use crutches for a period of 6 – 8 weeks to allow adequate development of the new cartilage. If the operation is on the back of the kneecap or the adjacent bone then you will be able to walk normally but will have to avoid putting any pressure through a bent knee (i.e. going up & down stairs,

If the tear in your cartilage is not suitable for stitching, then the loose or torn pieces will be trimmed away. Your post-operative pain and swelling should be minimal and you will be able to return to normal activity as soon as the inflammation has settled.

**NB:** Post-operative recovery and short term return to sport is much quicker following simple partial menisectomy however, if the tear in the meniscus is suitable for repair, this is much more desirable for the long-term function of the joint.

## Joint Surface Damage

If, at arthroscopy, some damage is found on the joint surface (the articular cartilage), then there are various procedures which can be done depending on the severity. Articular cartilage does not naturally repair itself and procedures carried out on areas of minor damage are aimed at removing debris and smoothing surfaces to prevent/delay further progression. In more severe cases, advanced modern techniques aim to produce an element of healing.

If the damage is minor, the surface of the cartilage may just be shaved to remove irregularities. In this case, return to normal activity will be governed by discomfort and swelling. These are not usually severe and, if you were quite fit before surgery, you could be back to normal in a few weeks.

If you need to use crutches for some time, (ie. weeks) then it is a good idea to continue to wear the stockings for this period; they reduce the risk of thrombosis while you are not weight-bearing fully on your leg.

## ***MEDICATION***

Depending on the surgical procedure, you may or may not be given anti-inflammatory tablets. If you are given them, a course typically lasts for two weeks. Tablets should not be taken on an empty stomach as they can sometimes irritate the stomach lining. If you notice some acidity, this usually settles with an antacid such as “zantac”. Should you develop nausea, vomiting or abdominal pain, stop taking the tablets and contact either your G.P. or the knee clinic.

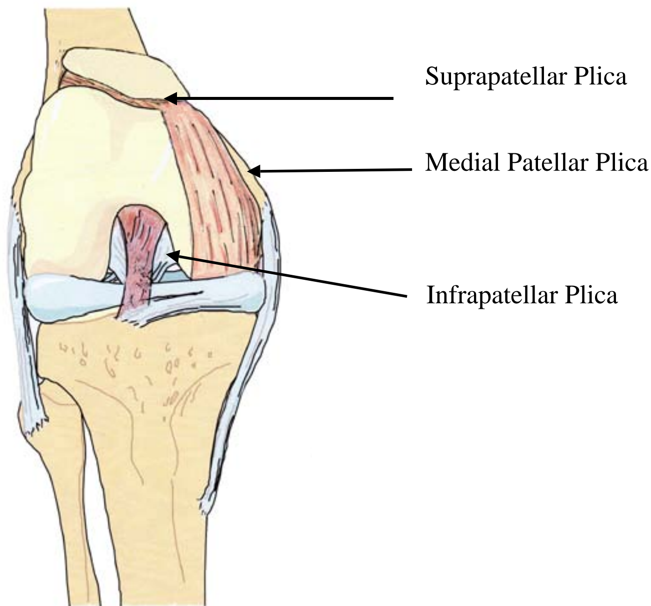
## ***DISCHARGE***

On discharge from hospital you will be given any medication required, an appointment for physiotherapy and an appointment to see the consultant.
You should arrange to be collected from hospital - you are not advised to drive yourself until you have full control of your lower leg, this may take a few days. Do check with your insurance company regarding their rules for driving after an anaesthetic.

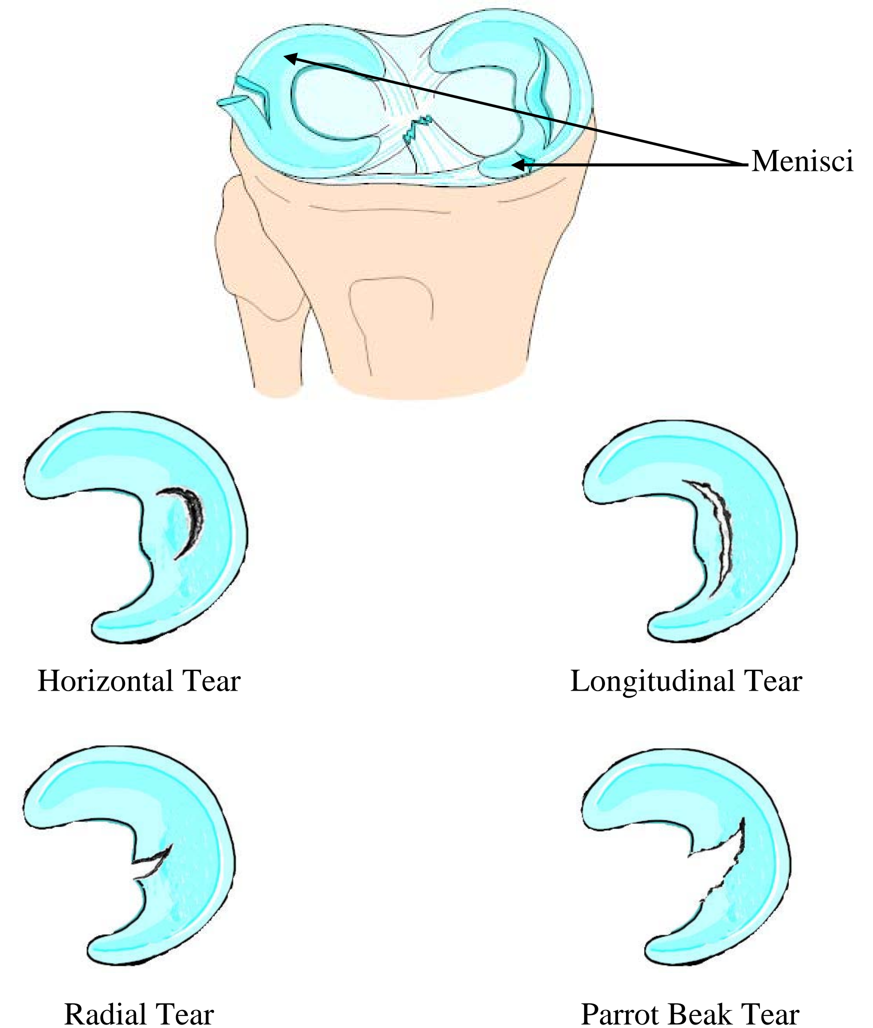
# PLI C E C T O M Y

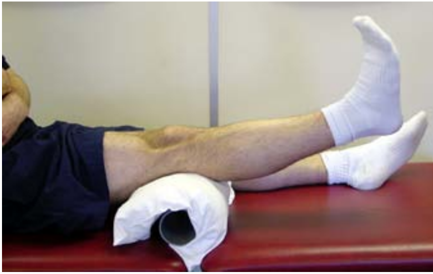
## Removal of a Plica (Plicectomy)

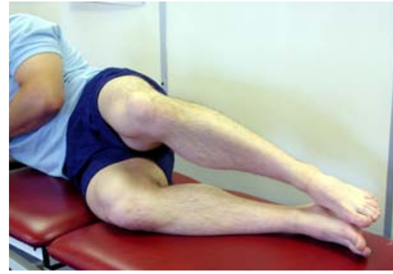
A plica is a fold in the membrane which lines the joint. Sometimes, for a variety of reasons, a plica can become swollen, thickened and inflamed; in this situation it may interfere with normal functioning of the knee causing symptoms such as clicking, locking, giving way, pain and stiffness. There are two plicae which are most commonly affected – the supra-patellar plica situated just above the kneecap, and the medial plica which is usually felt just adjacent to the inner edge of the kneecap.

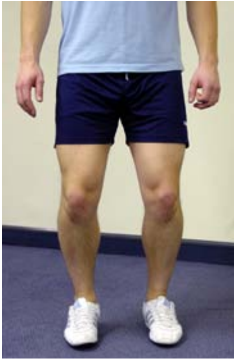



You may also be asked to restrict weight through the knee by using crutches for a few weeks. In very severe cases you may be asked to wear a splint which will hold the knee straight whilst you are walking about. The physiotherapist will advise you on this and your exercises and progress them as appropriate. Return to full normal activities will take 8 – 12 weeks, impact or contact sport may take a little longer.









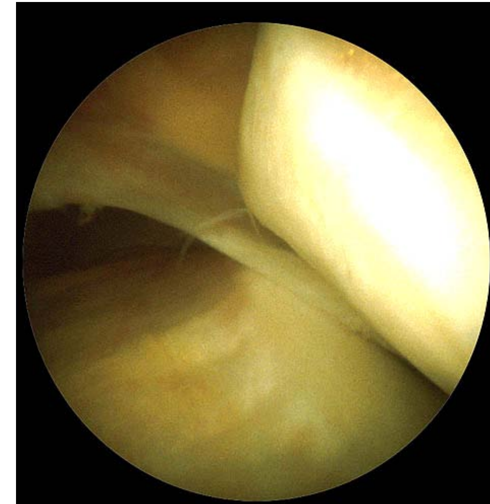
Exercises you may be given to strengthen the muscles which control movement of the patella

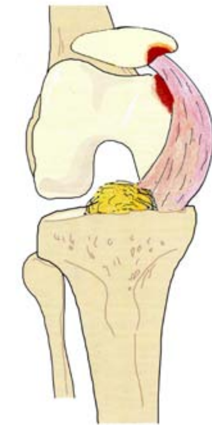
**Menisectomy / Sutured Meniscus**

Until fairly recently it was thought that the menisci were unable to heal if damaged. Now it is accepted that some tears can heal, given the right circumstances and menisci are now quite commonly sutured (stitched). This holds the cartilage in the optimum position to allow healing to take place, healing takes a minimum of 6 weeks.

If your cartilage has been stitched, you may have some discomfort immediately post-operatively and will require crutches, but this stage should pass fairly rapidly and you will become independent. Some restriction of activity will be required during the first six weeks to allow the meniscus to heal. During this period you will be advised not to bend your knee more than 90° - this is because greater bend will put stress on the suture line.

Often an inflamed plica will settle with rest, anti-inflammatory tablets and appropriate physiotherapy, but sometimes removal of the plica is necessary. This is a simple procedure from which recovery is usually quick and problem free. If you have a sedentary occupation you may only require a few days off work. Physiotherapy is aimed at obtaining normal movement, strength and full activity as soon as possible after any swelling has settled down. This can be as little as 2-3 weeks, but is obviously variable from patient to patient.

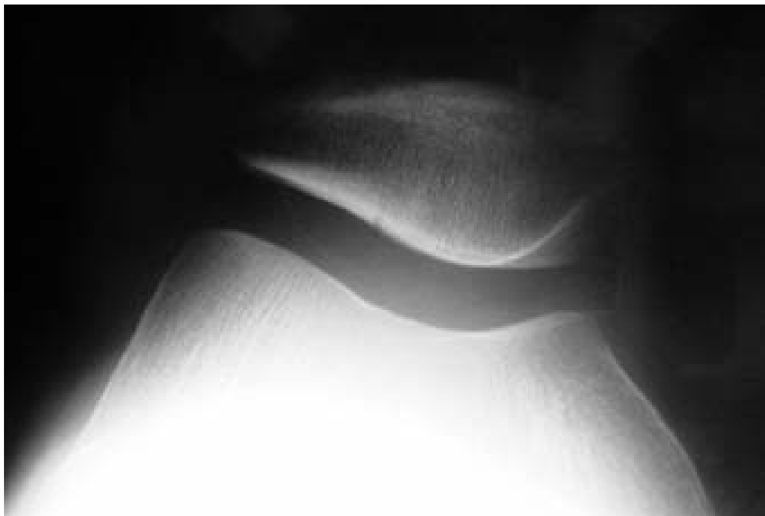




Impinging Medial Plica

**Lateral Release**

The knee-cap (patella) is a small bone situated on the underside of the quadriceps tendon which crosses the front of the knee. The bone is shaped to fit inside a groove (the trochlea) on the end of the thigh bone (femur), and glides through the groove as the knee bends and straightens.



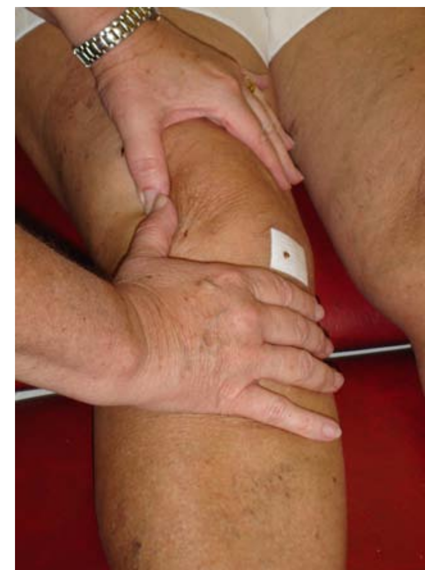
X'Ray to show even spacing between the patella & the trochlea groove

Occasionally the soft structures, such as the capsule, ligaments or tendons around the knee can become tight, or the muscles can become weak and imbalanced causing the knee-cap to move irregularly in the groove. Most commonly the knee-cap or patella tends to be pulled to the outside, this is known as "lateral tracking", and can cause severe symptoms including pain, particularly on stairs, and giving way. If untreated this may lead to abnormal wear on the joint surfaces and eventually osteoarthritic changes may occur.

Diagrams to show lateral tracking & lateral tilt of the patella

A "lateral release" involves a small internal incision being made through the tight bands in the capsule, thus allowing the patella to move back to the correct position. This procedure is carried out arthroscopically from the inside.

Appropriate post-operative physiotherapy is imperative to regain normal muscle balance and strength. The release will eventually heal so your physiotherapist will show you how to move your kneecap to prevent the scar tissue becoming tight and inflexible, otherwise a recurrence of symptoms is possible.



The very nature of the "lateral release" procedure means that the knee may become quite swollen post-operatively although, with new instruments used in surgery, this is less common. Some swelling is expected and is not a problem, but does mean that you will need to curtail your activity to allow inflammation to settle. The physiotherapist will guide you on increasing exercise gradually.

It may take up to four to six weeks to perform everyday activities, and three months to return to sport. Time needed off work will be dependant on your occupation - if unsure discuss this with the physiotherapist or doctor.