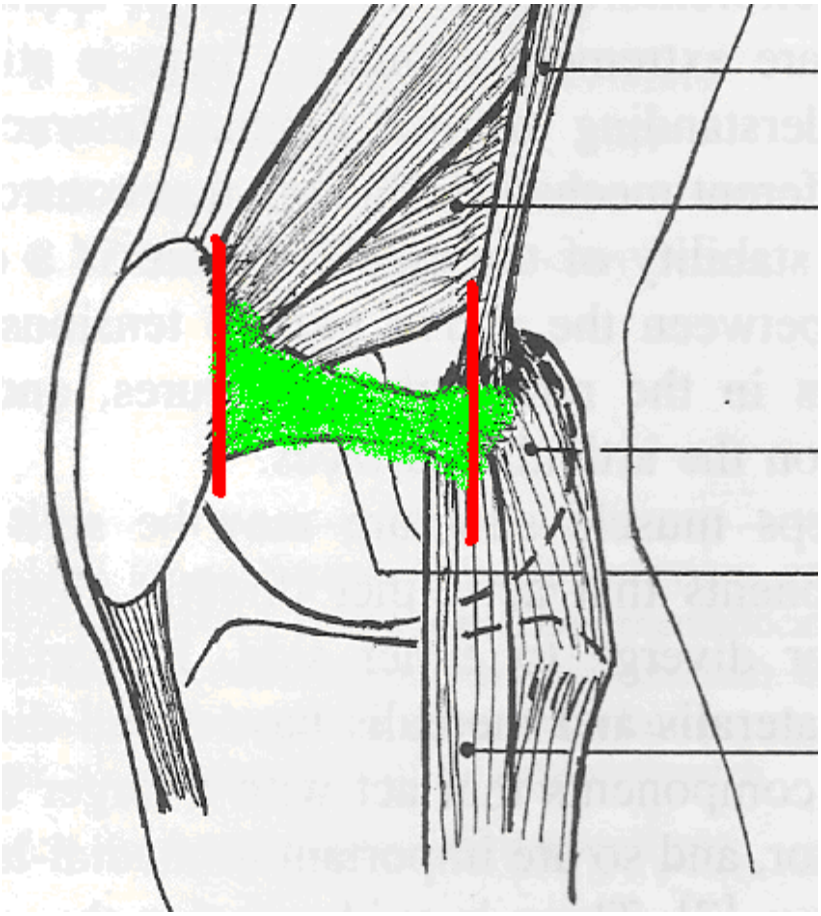
MPFL RECONSTRUCTION

This procedure is recommended for patients who have had multiple kneecap dislocations.

The inherent stability of the kneecap has been compromised by tearing of the ligament that acts as a check rein on the inside aspect of the kneecap.

It also means that the kneecap is being pulled over excessively, to the outside, due to the imbalance that now exists.
(This is like a tightrope walker who has lost balance on one side and is constantly being pulled over to the other side, due to the excess weight on the latter side)



This procedure corrects some of the soft tissue imbalances that exist after patella (kneecap) dislocation, but you must be aware that there was probably an inherent problem with your kneecap system to start

with. This means that there may be other factors that contribute to kneecap dislocation other than the ligament injury.

Factors that may contribute to dislocations:

- General laxity of joints – “double-jointedness”
- Bony architecture that may not confine the kneecap properly
- A “high-riding” kneecap – this means that the kneecap does not get confined by the bones until the knee has bent a significant way, making it more prone to dislocation before it is confined.
- Excessive muscle pull from the outside – this can occur when there is excessive outward rotation of the hip, knees (knock-kneed), ankles (walking with toes pointing outwards) or flat feet.
- Severe trauma – a repeat episode of significant force, or a sudden twist of your knee.

All of the above means that you could have been more or less predisposed to this condition, and that by reconstructing the ligament, the risk of dislocation may be lower but there is no guarantee that it will never happen again. We will only be correcting one aspect of the situation

WHY IS IT APPROPRIATE TO CARRY OUT THIS PROCEDURE?

Repetetive dislocations, or even partial dislocations produce a lot of pressure and force across the kneecap joint and therefore each time this happens, the joint surface is at risk of being damaged. You may already have some damage, and even loose fragments, which is why I always carry out an initial arthroscopy prior to the reconstruction.

There is also a risk of damage to other structures within the knee, and these would need to be addressed if they have occurred.

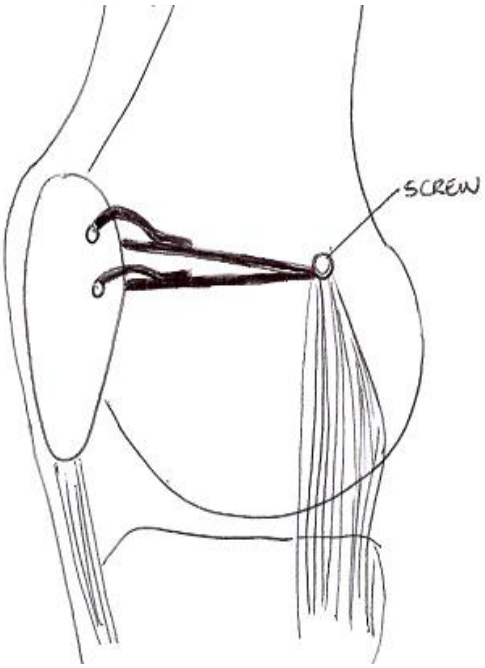
WHAT DOES THE MPFL RECONSTRUCTION PROCEDURE ENTAIL?

Once I am satisfied that I have addressed all the damage within the knee, I then harvest a hamstring tendon. This means that I take out one of your hamstrings as it attaches to the inside of your leg, just below the knee. This is done through an inch long cut, and a special device is tunneled under the skin, over the tendon. The tendon is then cut off at about 20cmmup the thigh, and the tendon is pulled out

through the small cut. That cut is then closed and the hamstring tendon is prepared for use as a graft.
There is a very, very low risk of problems occurring at the harvest/donor site and most patients don’t even miss the tendon that gets sacrificed.

Through 2 small cuts, each measuring about 3cm, (red lines, figure 1), which varies slightly from person to person, the graft is looped and attached to the side of the kneecap, and then to the usual attachement site on the femur(thigh bone), where the original ligament attaches. that The latter attachment is by means of a screw holds the soft tissue in the bone.

View looking along length of leg



Side view

POST-OPERATIVE MANAGEMENT

Patients usually come in on the day of surgery.
The hospital stay is either I or 2 nights, depending on pain control, mobility etc.

You will be on crutches for 4 weeks, where you can touch your foot down during this time, but nothing more than that. You will be walking with a bent knee, ie on tip-toes.

Thereafter you can fully weight-bear.

Range of movement can be achieved as soon as possible and the physios in the ward will guide you. Be prepared for a weakness of the thigh muscles for a few months, and for a few weeks you won't be able to lift your leg up in the air in a straight position.
I will see you at the 1 week mark. We will discuss the operation and commence formal physiotherapy.

If you would like the arthroscopic part of the operation to be recorded for your viewing "pleasure" please bring a flashstick with you to the hospital. I recommend you do this, even if you won't want to watch it. It is good to keep records.

IT IS ADVISABLE NOT TO UNDERTAKE ANY LONG HAUL AIR TRAVEL FOR 6 WEEKS POST SURGERY (SHORT HAUL – 4 WEEKS). THERE IS A RISK OF DVT (DEEP VEIN THROMBOSIS – CLOTS IN THE VEINS OF THE LEG). PLEASE DISCUSS THESE ISSUES WITH ME IF YOU INTEND TO TRAVEL.

If air travel is essential, then certain precautions are necessary:

1. You may be given "blood thinning" injections around the time of your flights – we will discuss this.

The most important factor that causes DVT is immobility – This results in inadequate venous blood flow to the heart, resulting in possible clots forming in the calf veins. The following may help to enhance the blood flow to the heart

2. during the flights I recommend TED stockings – these are compressive medical stockings, which may empty out the deep veins in the calf, resulting in less clot formation
3. it is recommended that you do calf pumping exercises during the flight, as often as possible.
4. It is also recommended that you get up and stretch, as well as walk up and down the isle of the aircraft as often as possible.
5. limit alcohol intake and drink a lot of water. Dehydration plays a role also

I hope this information has been helpful. Please make contact with me if you have any further queries.