Pre-op Phase:

Injury Recovery & Readiness for Surgery

Whilst people may want to have the operation as soon as possible, it's important to allow the knee to settle from the injury and regain a good level of strength and function before surgery.

Recent research has suggested that people who attain full range of motion, good quadriceps and hamstring strength, and minimal swelling prior to surgery have better outcomes than those who don't up to 2 years post surgery.

Exercises and activities during this phase typically include regular icing of the knee to reduce swelling, range of motion exercises, low impact aerobic exercise such as cycling, and a progressive strengthening regime.

Strength exercises should progress in parallel with the clinical condition of the knee. As the pain & swelling settles, and the range of motion increases, strength exercise can progress to include weighted exercises in the gym and jump and land activities such as hopping drills.

Aggressive change of direction activities should be avoided during this phase.

This pre-surgery phase also allows clinicians to gather information that can be used to determine readiness to return to training and sport.

The three most important goals of the Pre-op Phase are;

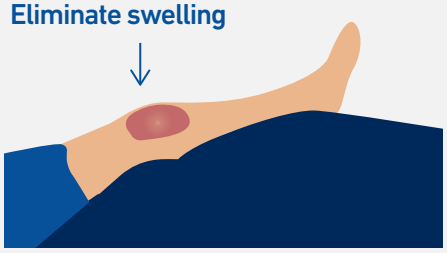
- Eliminate swelling
- Regain full range of motion
- Regain 90% strength in the quads and hamstring compared with the other side

Pre-op Phase

Injury recovery & readiness for surgery

Most important goals

Eliminate swelling



Regain full range of motion

Regain 90% strength in the quads and hamstring compared with the other side

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Injury Recovery & Readiness for Surgery

Pre-op: Outcome Measures and Goals

Outcome Measure	Test Description & Reference	Goal	√
Passive Knee Extension	Supine with a long arm goniometer (Norkin & White, 1995). Bony landmarks: greater trochanter, the lateral femoral condyle, and the lateral mallelous.	0°	○
Passive Knee Flexion	Supine with a long arm goniometer (Norkin & White, 1995). Bony landmarks: greater trochanter, the lateral femoral condyle, and the lateral mallelous.	125+	○
Swelling/ Effusion	Stroke Test (Sturgill et al, 2009) Zero: No wave produced on downstroke Trace: Small wave on medial side with downstroke 1+: Large bulge on medial side with downstroke 2+: Effusion spontaneously returns to medial side after upstroke 3+: So much fluid that it is not possible to move the effusion out of the medial aspect of the knee	Zero – 1+	○
Strength	Hand held dynamometer testing (Mentiplay et al, 2015) Quads: Participant seated and hip and knees flexed at 90°. Dynamometer placed on the anterior aspect of the shank, proximal to the ankle joint. Hamstrings: Participant seated and hips and knees flexed at 90°. Dynamometer placed on the posterior aspect of the shank, proximal to the ankle joint.	90% compared with other side	○
Single Hop Test	Single leg hop test (Reid et al, 2007) Subjects stand on one leg and hop as far forward as possible and land on the same leg. The distance is recorded from toe at take-off to heel at landing with a tape measure which is fixed to the ground. Two valid hops are performed, with the average (mean) of the 2 being used for calculation. A limb symmetry index is calculated by dividing the mean distance (cms) of the involved limb by the mean distance of the non involved limb then multiplying by 100.	90% compared with other side	○