



Dr Gordon L. Slater  
MBBS FRACS(Ortho)



## Accelerated **ACL** Rehabilitation Program

The anterior cruciate ligament (ACL) has the important role of providing rotatory stability to the knee. It allows activities such as pivoting and cutting (changing direction) to be performed with confidence. Patients with a torn ACL (ACL deficient knee) have difficulty in performing such maneuvers, and often complain of their knee “giving way” or of recurrent episodes of “instability”.

ACL reconstructive surgery has progressed rapidly over the past 2 decades with refinement in surgical techniques and instrumentation. Arthroscopic, or “key-hole”, surgery has allowed ACL reconstructive surgery to be performed as a day-only procedure, with immediate transition to physiotherapy and rehabilitation.

The method of rehabilitation for the reconstructed knee follows the principles of **Accelerated ACL Rehabilitation Program**. This is divided into 4 phases to help aid the patient and therapist on the timing and key aims and outcomes of each phase in relation to the surgery.



## Phase 1 - Day 1/10 (Immediate post-operative)

### Aims

- Uncomplicated wound healing
- Reduce knee swelling
- Full terminal knee extension
- Active range of motion (110° flexion)
- Full weight bearing and correct gait pattern

### Activities

- Wound review by your surgeon
- Ice packs - heel loading with progression of knee to full extension

## Phase 1 - Week 2-6

### Aims

- Maintenance of full range of motion
- Quadriceps strengthening and endurance
- Improved quadriceps muscle control
- Hamstring strengthening
- Commence knee proprioception retraining

### Activities

- Ongoing passive and active range of motion exercises
- Commence stationary bicycle (with gradual lowering of seat height)
- Increase resistance on seated leg-press, and increased repetitions
- Open chain hamstring strengthening exercises (prone hamstring curls)
- Half squats
- Step exercises and mini-trampoline

## Phase 3 - Week 6-12

### Aims

- Optimize knee proprioception
- Increase muscle strength and endurance
- Prepare patient for pre-injury activity

### Activities

- Lateral shuffles and cross-over drills
- Backward running
- Progressive resistance on leg press and hamstring curls
- Commence running in straight line
- Increase cycling resistance
- Introduce early sport specific activities

## Phase 4, 3-6 Months

### Aims

- Return to pre-injury activities
- Ongoing proprioception training
- Optimize muscle strength

### Activities

- Sport specific drills and exercises
- Single leg hops
- Side steps and running
- Slide boards
- Higher resistance and lower repetition weight training (open and closed chain)