

### Acute Recovery Week 1 - 2

#### Aims:

Minimise muscular atrophy.  
Minimise muscular tightness.  
Minimise swelling.  
To achieve full extension and flexion to 90°.  
Minimise concurrent postoperative complications.

- Static co-contraction exercises at full extension and 30 degrees knee flexion in neutral and internal hip rotation, with biofeedback if possible
- Soft tissue treatment to tight lateral structures, hamstrings and calf muscle
- Reduction of swelling and pain using ice, elevation, co-contractions
- Active range of motion exercises to encourage ROM as permitted by brace (if used)
- If brace is used to remain in situ until instructed by Dr Lisle
- Remain PWB on crutches for 2 weeks, instruction regarding same

\*AVOID: Quadriceps exercises in external hip rotation, open chain quadriceps exercises, patellofemoral mobilisations, full weight bearing until sufficient muscular control

### Week 3 - 6

#### Aims:

Regain muscular strength and flexibility.  
Normalise gait.  
Regain full ROM.

- Progress co-contraction exercise to eccentric quadriceps in weight bearing positions, gym equipment such as stationary bike, leg press to 45° flexion, mini tramp with low resistance
- Soft tissue treatment to tight lateral structures, hamstrings and calf muscle
- Scar massage
- Commence full weight bearing with gait re-education focusing on correct heel strike/toe off
- Active range of motion exercises to regain full range of motion

\*AVOID: Quadriceps exercises in external hip rotation, open chain quadriceps exercises, patellofemoral mobilisations

### Week 6 - 12

#### Aims:

Restoration of muscular strength and ROM  
Restoration of proprioceptive control

- Continue quadriceps and co-contraction exercises encouraging VMO activation. Progress by increasing repetitions, length of contraction and dynamic conditions
- Full range of motion using active and passive techniques
- Eccentric quadriceps exercises in external hip rotation may be commenced only after sufficient VMO strength to perform eccentric quads in neutral hip rotation from 10cm step, 10 reps X 3 sets without fatigue
- Commence stepper, rower and cross trainer, pool work once sufficient ROM and quadriceps control
- Commence proprioceptive and balance training eg wobble board
- Treat generalised lower limb deficits, e.g. gluteal control and flexibility, hamstrings flexibility, ITB, gastrocs and soleus, etc.

\*AVOID: open chain quadriceps exercises, patellofemoral mobilisations

### Weeks 12 +

#### Aims:

Continuation of functional rehabilitation

- Progress co-contractions to more dynamic movements, e.g. step lunges, half squats, wall squats
- Patellofemoral taping should be introduced and continued for 1 year following surgery during sporting activities
- Introduce sport specific activities for strengthening and agility
- Start cycling on normal bicycle
- Progress resistance on gym equipment such as exercise bike, rower, cross trainer pool work can include using flippers

\*AVOID: continue to avoid open chain quadriceps exercises which increase the patellofemoral joint forces