

## ACL REHABILITATION

### EARLY PHASE (0-6 weeks)

Post-operatively your knee needs to recover from surgery and the main goals at this time are as follows:

**Swelling Control:** Elevation and Cold packs

**Range of motion** (may be limited by swelling, try to reduce with cold packs)

- **Exercise 1 (Flexion):** sitting on a chair plant your foot to the floor and shuffle your buttocks forward to flex the knee.
- **Exercise 1 (Extension):** While lying on your belly hand the knee over the edge of the bed and allow gravity to take the leg to regain extension.
- **Exercise 2 (Extension):** While sitting up in bed have the knees extended and push down on the front of the knee to achieve extension and hold it there for 30 seconds.

**Weight bearing as Tolerated** is allowed use crutches as required and most will need them in the early phase (aim to wean off crutches)

#### **Muscle strength**

- Static contraction: quadriceps and hamstrings
- Concentrate on VMO strengthening with contractions
- Avoid resisted strengthening 6-8 weeks post-op

#### **Gait retraining**

- Aim to restore normal gait pattern
- Achieve full extension when walking

## **MID-PHASE (6 weeks to 3 months)**

- Swimming at 8 weeks (note 6-8 weeks swimming without kicking)
- Stationary bike 6 weeks and on

### **Swelling Control**

- Continue icing of the knee, especially after each exercise session

### **Range of motion**

- Active and passive methods

### **Muscle strength** (Closed chain strengthening)

- Resistance training (resistance band, steps, half and full squats)
- Introduction of rowing machine, leg press and leg curls)
- Strengthening of gluteal muscles and balance training when strengthening gluteals
  - Single leg balance and half squats

### **Quadriceps**

- **Exercise 1:** Place a towel under the affected knee while lying on your back. Contract your quadriceps and press the back of your knee into the towel. Hold for 10 second for 5 seconds, and then relax
- **Exercise 2:** Place a towel behind the knee and keep the knee straight, while on your back and hold there for 30 seconds and repeat

### **HAMSTRINGS STRENGTHENING**

- **Exercise 1:** While on your back and the knee flexed press your heel into the floor and hold for 10 seconds
- **Exercise 2:** Lie on your belly and flex your knees to 90 degrees and bend the knee and try to achieve full flexion
- **Exercise 3:** In a seated position utilize a resistance band around the ankle. Ends of the band can be held by another person or a stationary object and then slowly flex your knee. Hold the knee flexed for 30 seconds while there is counter resistance from the band.

### **HIP STRENGTHENING**

- **Exercise 1:** Straight leg raises
- **Exercise 2:** Place an elastic band around your ankles and slowly walk sideways (be careful and don't trip!)
- **Exercise 3:** Stand with one leg on a step and the other leg hanging and lower your body down and raise yourself (remember to stabilize yourself with the handrail)

### **LATE PHASE (3 months to 9 months)**

- Jogging can commence provided full range of motion is achieved, quadriceps and hamstrings strength is sufficient (will need to be assessed by your physiotherapist) and balance is well controlled
- Riding a bicycle can commence
- Jumping and hopping in a supervised setting with your physiotherapist
  - Jumping and landing needs to be trained to be safe
  - Skipping on the spot
  - Discussion and movement and technique of changing direction to be discussed with physiotherapist as this will commence at approximately 9 months
- Ongoing pool work with kicking in the water

### **Return to training in sports at 9 months and onwards**

- Gradual return to sport with a incremental increase in participation level to full participation expected at 12 months
- Full strength, range of motion and normal gait