

# POSTOPERATIVE PCL RECONSTRUCTION REHABILITATION PROTOCOL

## 3 MONTHS -1 YEAR (PHASE 5)

### Goals

- ✔ Continue to improve Balance and Proprioception using closed kinetic chain, coordination and incoordination exercises
- ✔ Continue to maintain quadriceps strength and hamstring flexibility
- ✔ Safe and gradual return to athletic participation
- ✔ Maintenance of strength, endurance, and function
- Proprioceptive and Balance Training and Exercises and its progressions
- Avoid jogging, running, cross-legged sitting, deep squatting and any contact sports activity for at-least 8-10 months post-op
- Progression of ambulation on uneven surface and stairs(both ascend and descend)
- Emphasis on enhancement of eccentric contraction and eccentric control of knee Continue closed kinetic chain exercise progression
- After 3-6 months, continue exercises as advised above with gradual progression of thera-band resistance
- After 6 months brisk walking can be started along with other exercises prescribed by the physiotherapist
- After around 9-10 months, brisk walking can be progressed to jogging in supervision of the physiotherapist
- After 11 months, jogging can be progressed to running with controlled time duration and controlled speed in supervision of the physiotherapist
- Sport-specific functional progression, which may include but is not limited to
  - Slide board.
  - Figure-of eight
  - Jumping
  - Hurdle Jumping
  - Agility drills
  - Star Excursion and other advanced proprioceptive exercises

After 1 year back to sports with functional knee brace for at-least next 1 year especially for contacts sports like football, kabaddi, rugby among other

Anterior  
cruciate  
ligament

Posterior  
cruciate  
ligament



# POSTOPERATIVE PCL RECONSTRUCTION REHABILITATION PROTOCOL

## WEEK 0 -2 (PHASE 1)

### Goals

- ✔ Protect the graft and ensure wound healing
- ✔ Control inflammation and swelling
- ✔ Initiate early mobilization and weight bearing
- ✔ Oedema Control
- ✔ Use of dial lock knee brace locked at 60° knee flexion
- Straight leg raises flexion, abduction and extension
- Gluteal sets, Hamstrings sets, Ankle Toe pumps, Static quads, Knee abduction
- Ice pack with knee in full extension after exercise
- Patellar mobilizations( Stretch in all 4 direction- superior, inferior, medial and lateral)
- Quad isometrics( hold for 10 sec, 10 repetitions), Prone leg hangs
- Weight bearing on walker/crutches as tolerated with brace on.
- Avoid jogging, running, cross-legged sitting, deep squatting and any contact sports activity for at-least 8-10 months post-op
- Pillow under proximal posterior tibia at rest to prevent posterior sag
- Avoid hamstring activation or guarding
- Avoid hyperextension activities

## WEEK 2 -4 (PHASE 2)

### Goals

- ✔ No active knee extensor lag with proper patella-femoral stability
- ✔ Progression of weight bearing with dial lock brace locked at 90°
- ✔ Achieve around 0-90° of active range of motion at end of 4 weeks and maintain upper body strength
- ✔ Moderate functional independence
- Use dial lock knee brace locked at 90° with open patella locked for all activities including walking
- Start gentle heel slides in supine lying
- Gravity assisted knee flexion in high sitting to be encouraged to reach till 90° at the starting of 4th week
- Quad isometrics( hold for 10 sec, 10 repetitions)
- VMO strengthening exercises
- Stick aided full weight bearing with dial lock knee brace locked at 90° till 4th week with heel-toe pattern
- Pillow under proximal posterior tibia at rest to prevent posterior sag
- Avoid hamstring activation or guarding
- Avoid hyperextension activities

## WEEK 4 -6 (PHASE 3)

### Goals

- ✔ No active knee extensor lag with proper patella-femoral stability
- ✔ Progression of weight bearing with gradual weaning off assistive device and brace
- ✔ Achieve around 0-120° of active range of motion at end of 6 weeks and maintain upper body strength
- ✔ Moderate functional independence
- Use dial lock knee brace locked at 120° with open patella for all activities including walking
- Start gentle heel slides in supine lying
- Start prone knee bending for Hamstring strengthening
- Active knee flexion to be encouraged 120° at the starting of 6th week
- Quad isometrics( hold for 10 sec, 10 repetitions)
- VMO strengthening exercises
- Stick aided full weight bearing with dial lock knee brace locked at 120° till 6th week with heel-toe pattern
- Pillow under proximal posterior tibia at rest to prevent posterior sag
- Avoid hyperextension activities

## WEEK 6 -12 (PHASE 4)

### Goals

- ✔ Enhancement of Endurance and Cardiovascular fitness
- ✔ Strengthening of lower extremity muscles and maintaining upper body strength
- ✔ Ensure Proper and efficient Gait Pattern with excellent patella-femoral stability
- ✔ Completion of closed chain kinematic exercises independently
- ✔ Proprioception and Balance Restoration
- ✔ Full independence in ADLs
- Stationary bike for hip and knee muscle strengthening
- Discard stick for ambulation
- Treadmill walking for proper and efficient gait pattern
- Sit to stand with gradual decrease in height along with stretching of gastrocnemius and soleus and resistance band exercises are to be done
- Use of thera-band for quads and hams strengthening in Closed kinematic chain after 8 weeks
- Proprioceptive and Balance Training and Exercises and its progressions
- Emphasis on enhancement of eccentric contraction and eccentric control of knee
- Wall squats to 90°, leg presses; dynamic step lunges and lateral and frontal stair step up- step down

