

**ACL Reconstruction with PCL, MCL or Posterolateral Corner  
Repair or Reconstruction**

**DETAILED BRACE AND PHYSIOTHERAPY PRESCRIPTION:**

**PHASE 1: Immediate Post-operative Phase (Approximate timeframe: 6-8 weeks)**

- Full knee extension ROM
- Hinge knee brace 0-45 for weeks 3-4, 0-70 weeks 5-6, 0-90 weeks 7-8
- Good quadriceps control ( $\geq 20$  no lag SLR)
- Minimize pain
- Minimize swelling
- Normal gait pattern
- Knee brace: Patient will use hinge knee brace first 6 weeks minimum
- Exercise Suggestions:
  - Extension: Low load, long duration (~5 minutes) stretching (e.g., heel prop, prone hang minimizing co-contraction and nociceptor response)
  - Flexion: Wall slides, heel slides, seated assisted knee flexion, bike: rocking-for-range
  - Patellar mobilization (medial/lateral mobilization initially followed by superior/inferior direction while monitoring reaction to effusion and ROM)
  - Quadriceps sets emphasizing vastus lateralis and vastus medialis activation
  - SLR emphasizing no lag
  - Double-leg quarter squats
  - Standing resistance band terminal knee extension
  - Hamstring sets
  - Hamstring curls
  - Side-lying hip adduction/abduction (Avoid adduction moment in this phase with concomitant grade II – III MCL injury)
  - Quad/ham co-contraction supine
  - Prone Hip Extension
  - Ankle pumps with resistance band
  - Heel raises (calf press)
- CRITERIA FOR PROGRESSION TO PHASE 2
  - no lag SLR
  - Normal gait
  - Crutch D/C
  - ROM: no greater than 5° active extension lag, 90° active flexion

**PHASE 2: Early Rehabilitation Phase** (Approximate timeframe: weeks 8 to 15)

- Full ROM
- Improve muscle strength
- Progress neuromuscular retraining
- Exercise Suggestions:
  - ROM
  - Low load, long duration (assisted prn)
  - Heel slides/wall slides
  - Heel prop/prone hang (minimize co-contraction / nociceptor response)
  - Bike (rocking-for-range → riding with low seat height)
  - Flexibility stretching all major groups
  - Quad sets
  - Mini-squats/wall-squats
  - Steps-ups
  - Knee extension from 90° to 40°
  - Leg press
  - Hamstring curls
  - Resistive SLR with resistance band
  - Standing heel raises: progress from double to single leg support
  - Seated calf press against resistance
  - Bike
  - Elliptical trainer
  - Stairs
- CRITERIA FOR PROGRESSION TO PHASE 3
  - Full ROM
  - Minimal effusion/pain
  - Functional strength and control in daily activities

**PHASE 3: Strengthening & Control Phase** (Approximate timeframe: weeks 16 through 20)

- Maintain full ROM
- Light jogging straight forward without pain or swelling
- Exercise Suggestions:
  - Squats
  - Leg press
  - Hamstring curl
  - Knee extension 90° to 0°
  - Step-ups/down
  - Lunges
  - Wall squats
  - Wobble board / rocker board / roller board
  - Perturbation training
  - Varied surfaces

- Straight line light jogging on treadmill or in a protected environment (NO cutting or pivoting)
- Bike
- Elliptical trainer
- Stairs
- CRITERIA FOR PROGRESSION TO PHASE 4
  - Light jogging without pain or swelling
  - Neuromuscular and strength training exercises without difficulty

**PHASE 4: Advanced Training Phase** (Approximate timeframe: weeks 21 to 28)

- Running straight forward at 75% speed without difficulty
- Jumping without difficulty
- Hop tests at 75% contralateral values
- Aggressive Strengthening
- Exercise Suggestions:
  - Squats
  - Lunges
  - Plyometrics
  - Agility Drills
  - Shuffling
  - Hopping
  - Vertical jumps
  - Wobble board / rocker board / roller board
  - Perturbation training
  - Varied surfaces
  - Jogging
  - Other cardiopulmonary exercises as mentioned previously
- CRITERIA FOR PROGRESSION TO PHASE 5
  - Maximum vertical jump without pain or instability
  - 75% of contralateral on hop tests

**PHASE 5: Return-to-Sport Phase** (Approximate timeframe: weeks 29 to 40)

- 75% speed patterns/change of direction
- 85% contralateral strength
- 85% contralateral on hop tests
- Sport specific training without pain, swelling or difficulty
- Exercise Suggestions:
  - Aggressive Strengthening
  - Squats
  - Lunges
  - Plyometrics
  - Sport Specific Activities
  - Interval training programs
  - Full skating, non contact drills

- Running patterns in football
  - Sprinting
  - Change of direction
  - Pivot and drive in basketball
  - Kicking in soccer
  - Spiking in volleyball
  - Skill / biomechanical analysis with coaches and trainers
- RETURN-TO-SPORT EVALUATION RECOMMENDATIONS: >40 weeks
  - Hop tests (single-leg hop, triple hop, cross-over hop, 6 meter timed-hop)
  - Isokinetic strength test
  - Vertical jump
  - Deceleration shuttle test
- RETURN-TO-SPORT CRITERIA:
  - No functional complaints
  - Confidence when running, cutting, jumping at full speed
  - 85% contralateral values on hop tests