

**ACL Reconstruction with Meniscal Repair or
Meniscectomy
Drs. Pearce and Wolstenholme
Post-Operative and Physiotherapy Instructions**

DETAILED BRACE AND PHYSIOTHERAPY PRESCRIPTION:

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

- Full knee extension ROM
- Flexion to 110 degrees
- Good quadriceps control (≥ 20 no lag SLR)
- Minimize pain
- Minimize swelling
- Normal gait pattern
- Knee brace: Patient may use their pre-op ACL brace if they feel more comfortable with it
- 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, 130° active flexion

PHASE 2: Early Rehabilitation Phase (Approximate timeframe: weeks 8 to 11)

- 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
 - Hip adduction/abduction
 - 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 12 through 16)

- Maintain full ROM
- 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 jogging on treadmill or in a protected environment (NO cutting or pivoting)
- Bike
- Elliptical trainer
- Stairs

- CRITERIA FOR PROGRESSION TO PHASE 4
 - Jogging without pain or swelling
 - Hopping without pain or swelling (both feet)
 - Neuromuscular and strength training exercises without difficulty

PHASE 4: Advanced Training Phase (Approximate timeframe: weeks 17 to 24)

- 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
 - Running
 - 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 24 to 32)

- 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: >32 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