

Arthroscopic ACL Reconstruction Rehabilitation Protocol
E. Edward Khalfayan, M.D.

Pre-operative Rehabilitation

- Restore near full ROM
- Modalities PRN for swelling and pain control
- Quad activation, 4 way SLR, hip and core
- Instructions on comprehensive core training program
- Instructions on partial weight bearing and crutch ambulation

Phase 1 Post-operative Weeks 1-6

Day 3-4

- Office visit for dressing change and initiation of physical therapy

Week 1-2

- Office visit for wound check and suture removal
- Unlock brace at 7-10 days
- May sleep without brace after 7-10 days
- Wean off crutches when comfortable and feel secure walking without them (goal 10-14 days post-op)
- HEP
- Begin Physical Therapy for ROM, modalities and quad activation
 - Quad sets, SLR's, ROM
 - Mini squats to 45 degrees while holding onto a steady ledge
 - Patellar mobilizations
 - 4 way
 - ICE 20 minutes every 1-2 hours
 - Week 2 prone hangs

Week 3-6

Week 3

- Begin stationary bike against low resistance, raise seat as needed.
- Weight shifts
- Gait training
- Continue ROM. Complete extension **must** be maintained. If a flexion contracture is present, passive and active assisted exercises must be increased.

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Week 4

- Office visit for ROM check
- Progress CKC as tolerated. Avoid open chain knee extension exercises.
 - Leg press
 - Hamstring curls
 - Even surface balance/proprioception
- Begin Elliptical machine or Stairmaster
- Begin core strengthening

Week 6

- Discontinue brace for daily activities if there is adequate quad control
- May begin swimming (no frog kicks)
- Chair scoots
- Wall sits
 - Add ball squeeze for VMO
- Forward lunges, side lunges
 - no torsional or multi-plane exercises
- Continue to work on core strengthening, hip and lower extremity muscle strengthening

PHASE 2 Weeks 7-11

Weeks 7-11

- Office visit Week 8
- Continue improving core, hip and lower extremity muscle strength
- Step ups/downs
 - Single plane
- Shuttle (double leg, progress to single leg)
- Band walking
- Tilt board
- Single leg med ball toss
- ROM goal weeks 8-10
 - 0-120 degrees of flexion
- Week 10
 - If Alter-G, pool, or underwater treadmill is available start running progression
- Continue with over all muscle and core strengthening

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PHASE 3 Weeks 12-19

Weeks 12-16

- Office visit
- Continue with overall quad, hamstring, hip and core strength
 - Address any specific strength or neuromuscular deficits
- Lateral Step ups
- Lateral step-over's
- Week 12 may begin jogging straight ahead on a level surface if quad and hamstring strength are approximately 75% of opposite side and continue with running progression
- Slide board
- Fitter

Weeks 16-19

- Full ROM compared to the other side
- Box jumps
 - Double leg
 - Progress to single leg
- Progression to full weight room activities
 - Stay away from open chain knee extension exercises
 - Limit depth on squatting
- Start speed ladder
 - Straight ahead
- No restriction on rotational balance, proprioception drills

Phase 4 Weeks 20 to return to activity

- Office visit week 24
 - Custom fit ACL brace if returning to cutting or pivoting sports.
- Begin sprinting and agility drills when strength is equal to other side after completion of straight ahead jogging
 - Speed ladder progression
 - Jump training
 - Cutting
 - Sport specific activity (no contact) when cleared by MD
- Time to return to full unrestricted sport activity is typically 6-12 months depending on sport with MD clearance
- **Final visit at 9- 12 months**