

Postoperative Rehabilitation Protocol for Osteochondral Allograft Transplantation (OCA)

**Physical Therapy should be started within a week after surgery*

Postoperative weeks 0-6

- Precautions / Restrictions
 - Flat-Foot Weight Bearing (0-25%) for balance
 - Use crutches for 6 weeks
 - ***If osteochondral graft involving patella or trochlea, leave brace locked in extension for ambulation; unlocked at all other times.**
- Goals
 - Pain / edema reduction
 - Enhance quad recruitment
 - Restore ROM
- Range of Motion
 - Progress PROM and AAROM to tolerance
 - Goal 90 degrees flexion by 2 weeks
 - Obtain / maintain full extension
 - Stationary bike at week 2
 - No resistance, high seat. Lower the seat as motion permits.
- Strengthening
 - SLR in brace at 0 degrees until quad can maintain knee locked
 - Quad sets / hamstring co-contractions at multiple angles 10 x 10, 2-3 times daily
 - Glute sets
 - Patellar mobilization
 - Side-lying hip and core
- Modalities PRN

Postoperative weeks 6 - 12

- Precautions / Restrictions
 - 50% weight bearing weeks 6-8
 - Progress to WBAT after week 8
 - Discontinue crutches as normal gait mechanics are restored
 - No pivoting, twisting, hopping, jumping, running
- Range of Motion
 - Encourage full ROM as tolerated
- Strengthening
 - Normalize gait mechanics
 - Advance phase 1 exercises
 - Closed chain quadriceps and hamstring exercises
 - Advance gluteal strengthening exercises to closed chain
 - Stationary bike / Elliptical work
 - Double leg balance and proprioceptive training

- Leg Press 0-60 degrees, Mini squats, Wall sits
- Modalities PRN

Postoperative weeks 12-24

- Goals
 - Normalize gait
 - Progress balance and NM control
- Maintain full ROM
- Strengthening
 - Continue exercises from last phase
 - Progress lower extremity and gluteal strengthening
 - Advance lower extremity strengthening exercises (open and closed chain)
 - Progress balance and proprioception exercises (integrate balance with strengthening exercises – BOSU squat and lunges)
 - Begin functional activity / sport specific work
 - Include cardiovascular conditioning with elliptical, swimming, and cycle

Postoperative month 6+

- Goals
 - Progress to sport specific and/or unrestricted functional activities
 - Maximize strength and flexibility to meet demands of individual's sports/work activity
 - *Any return to sport and high-impact activity, needs clearance from the physician to confirm healing of the graft on x-ray before that progression may begin*
- Maintain full ROM
- Strengthening
 - Continue to advance strengthening, flexibility, and agility programs
 - Impact control exercises
 - Jogging and running progression
 - Sports/work specific balance, agility, and proprioceptive drills
- Work quad to within 15% or less difference of contralateral limb
- *Goal return to sport at 8-9mo*