



REHABILITATION PROTOCOL: KNEE CARTILAGE REPAIR

DR. KEVIN SHEPET

POST-OPERATIVE PHASE I: Weeks 0-6

PRIMARY GOALS:

- Protect healing tissue
- Decrease pain and effusion
- Gradually improve knee flexion
- Restore passive knee extension
- Regain quad control

BRACE:

- Locked at 0° for WB activities
- Sleep in locked brace for 4 weeks

WEIGHT-BEARING:

- NWB (if graft site is MFC)
- WBAT (if graft site is patella or trochlea)

ROM:

- Full passive knee extension immediately
- Initiate CPM POD 1 for a total of 6 hours per day x2-3 weeks progress
- CPM ROM as tolerated 5-10 degrees per day, up to 6w
- Knee flexion ROM goal: 90 degrees by 1-2w
- Knee flexion ROM goal: 105 degrees by 3-4w,
- 120° by 5-6w
- Patellar mobilization
- Stretch hamstrings and calf

STRENGTHENING:

- Ankle pump using rubber tubing
- Quad sets
- Multi-angle isometrics
- Active knee extension (no resistance)
- SLR
- Stationary bike when ROM allows

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- Biofeedback and electrical muscle stimulation prn
- Isometric leg presses by week 4
- May begin use of pool for gait training and exercises by week 4

POST-OPERATIVE PHASE II: Weeks 6-12

PRIMARY GOALS:

- Gradually increase ROM
- Improve quad strength/endurance
- Increase in functional activities

BRACE:

- D/C by week 8

WEIGHTBEARING:

- Progress WBAT
- FWB by 8-9 weeks
- D/C crutches by 9 weeks (if graft site is MFC)

ROM:

- Maintain full passive knee extension
- Progress to flexion to 125-135 degrees by week 8
- Continue stretching program as well as patellar mobilization

STRENGTHENING:

- Initiate weight shifts week 6
- Mini-squats 0-45° by week 8
- Closed kinetic chain (leg press)
- Toe calf raises by week 8
- Stationary bicycle (low resistance)
- Treadmill walking by weeks 10-12
- Balance and proprioception drills
- Initiate front and lateral step-ups and wall squats by weeks 8-10
- Continue use of biofeedback and electrical stimulation prn
- Use of pool for gait training and exercise

POST-OPERATIVE PHASE III: Weeks 12-26

ROM:

- Progress to full ROM
- Incorporate home exercise program for strengthening and maintenance 3-4 times per week.
- Progress resistance as tolerated, agility and balance drills, sports programs depending on patient
- Gradual return to full unrestricted functional activities by 6 months and beyond.

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