

Articular Cartilage Restoration – Medial or Lateral Compartment Post-Operative Protocol

Phase I – Maximum Protection

Weeks 0 to 6:

- Non-weight bearing for 6 weeks
- CPM 8 hours per day for 6 weeks

Goals

- Reduce inflammation
- Emphasis on patella mobility with manual mobilizations
- Progress to full range of motion emphasis on full knee extension

Exercise progression

- Quadriceps setting using NMES as needed
- Multi-plane straight leg raising increasing resistance as tolerated
- Core strengthening
- Stationary bike at week 1, no resistance
- Deep water pool program once incisions are healed
- Lower extremity stretching
- Foot, ankle and hip strengthening in open chain

Phase II – Progressive Stretching and Early Strengthening

Weeks 6 to 10:

- Begin partial-weight bearing with 2 crutches at 6 weeks
- Gradually progress to full weight bearing by 8 weeks

Goals

- Progress off crutches by week 8
- Control inflammation
- Full knee range of motion
- Normalize gait mechanics

Exercise progression (avoid impact activities)

- Open and closed chain hip strengthening, adhering to PWB status
- Double-limb closed chain exercise progressions
- Light leg press and or mini-squat above 90°
- Stationary biking and treadmill walking

Weeks 10 to 12:

Goals

- Control inflammation
- Full knee range of motion

Exercise progression (avoid impact activities)

- May gradually increase knee depth with squat/leg press as tolerated
- Single-limb closed chain exercise progressions, emphasis on pelvic and quad control
- Proprioception drills
- Step progression
- Increase intensity of stationary bike program, may add elevation to treadmill walking; may begin elliptical
- Swimming

Phase III and IV– Advanced Strengthening and Endurance Training

Weeks 12 to 20:

Goals

- Pass preliminary functional test

Exercise progression (avoid impact activities)

- Single leg training progressions
- Lunges, split squats as tolerated

Weeks 20 to 24:

- The following progression is designed for athletes desiring to return to impact/running sports. Patients not returning to impact activity are advised to focus primarily on non-impact cardiovascular exercise.

Exercise progression

- Begin light interval jogging, progressing very slowly with this
- Begin light, double-limb plyometric drills

Phase V – Return to Sport Functional Program

Weeks 24 to 36:

- The following progression is designed for athletes desiring to return to impact/running sports. Patients not returning to impact activity are advised to focus primarily on non-impact cardiovascular exercise.

Goals

- Pass return-to-sport functional test between 6-9 months

Exercise progression

- Single-limb plyometric training
- Multi-plane running and cutting
- Sport-specific drills

- ***Will see progressive improvement in all functional activities from 6 to 12 months. Must demonstrate patience and use sound judgment with load and rest intervals when returning to higher level activity.***

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