



# Articular Cartilage Transplantation

## General Considerations:

- Nonweightbearing status for 4 weeks post-op (resting foot on floor and driving are okay)
- Most patients will be in a hinged neoprene brace for support and to serve as a reminder not to bear any weight on that limb
- Depending on the location of the articular cartilage defect and subsequent graft, patients may have active and/or passive range of motion restrictions (this will be noted on the prescription); otherwise, push for full hyperextension equal to opposite side
- Regular manual treatment should be conducted to the patella and all incisions--with particular attention to the anterior medial portal--to decrease the incidence of fibrosis
- Light to no resistance stationary cycling is okay at 2 weeks post-op
- Early recruitment of the vastus medialis muscle will speed recovery
- No resisted leg extension machines (isotonic or isokinetic)
- Low impact activities for 3 months post-op
- Daily 1500 mg of Glucosamine Sulfate via Joint Juice or other sources

\*Use of the CPM for 6 hours a day for 4 weeks is imperative

## Week 1:

- M.D. visit day 1 post-op to change dressing and review home program
- Icing and elevation regularly
- CPM at home for 6 hours daily/at night
- Straight leg raise exercises (lying, seated, and standing), quadricep/adductio/gluteal sets, passive and active range of motion exercises
- Hip and foot/ankle exercises, well-leg stationary cycling, upper body conditioning
- Pool/deep water workouts after the first 2 days and with the use of a brace if any ROM restrictions
- Soft tissue treatments and gentle mobilization to posterior musculature, patella and incisions

## Weeks 2 - 4:

- M.D. visit at 8 - 10 days for suture removal (if any) and check-up
- Manual resisted (PNF patterns) of the foot, ankle and hip
- Continue with pain control, range of motion, soft tissue treatments and proprioception

exercises

- Nonweightbearing aerobic exercises (i.e. unilateral cycling, UBE, Schwinn Air-Dyne arms only)
- AFTER 2 weeks, bilateral cycling with light to no resistance

#### **Weeks 4 - 6:**

- M.D. visit at 4 weeks post-op, will progress to full weightbearing and discontinue use of rehab brace
- Wedge in the shoe may be indicated to mechanically unload the femoral condyle
- Incorporate functional exercises (i.e. squats, linebackers, lunges, Shuttle/leg press, calf raises, step-ups/lateral step-ups)
- Balance/proprioception exercises
- Road cycling as tolerated
- Slow to rapid walking on treadmill (preferably a low-impact treadmill)

#### **Weeks 6 - 8:**

- Increase the intensity of functional exercises (i.e. add stretch cord for resistance, increase weight with weightlifting machines)
- Add lateral training exercises (side-stepping, Theraband resisted side-stepping, lateral leaping onto toes as tolerated)
- Patients should be walking without a limp and range of motion should be at least 90 % of normal

#### **Weeks 8 - 12:**

- Low-impact activities until 12 weeks
- Patients should be pursuing a home program with emphasis on sport/activity-specific training