

**Lisa Kaplin, DO**

# OSTEOCHONDRAL FRACTURE FIXATION ( PATELLA) +/- MPFL RECONSTRUCTION REHAB

## **Phase 1**

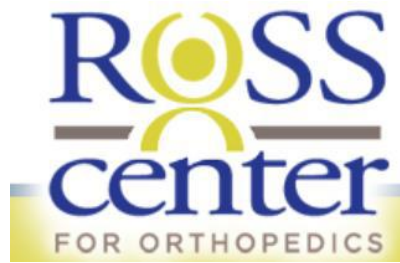
Postoperative Week 0-6

Goal:

- Full passive knee extension to 0°
- Full passive knee flexion to 90°, after week 6 advance passive motion significantly.
- Minimal pain and swelling
- Voluntary quadriceps control
- Ambulating partial weight bearing (PWB) by week 4-5.
- Normalized gait pattern in the pool

Treatment:

- In brace locked at 0° during weight bearing
  - Sleep in locked brace for 2-4 weeks
- **Weight bearing**
  - **Non Weight bearing for 1-2 weeks**
  - **Touch Toe Weight Bearing (20-30lbs) week 2-3 or sooner with MD approval**
  - **Partial Weight Bearing (25% of body weight) at week 4-5**
  - **Full WB by 6-8 weeks**
- Patellar mobilization daily
- Full passive knee extension immediately
- **Passive knee flexion 2-3 times daily**
  - **0-30 by end of post op week 2**
  - **0-60 at post op week 3-4**
  - **0-90 by post-op week 6, then shortly after week 6 should increase to full ROM 0-130**
- Calf and hamstring stretching
- Ankle pumps with thera-tubing
- Quad setting, Glut setting, Hamstring setting



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- Multiangle isometrics (quads and hamstrings)
- Active Knee extension 90° to 40° (no resistance)
- SLR 4 directions (no resistance)
- Stationary bike when ROM permits (no resistance)
- At week 4
  - Multi angle leg press isometric
  - Pool program
- modalities for pain and swelling control
- Biofeedback and muscle stim as needed
- gradual return to activities
- NO PROLONGED STANDING

### **Phase 2**

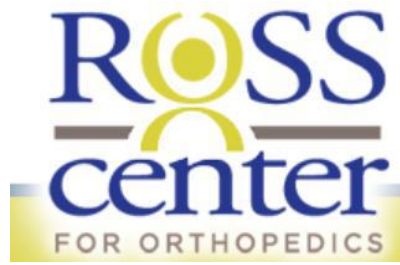
Postoperative Week 6-12

Goal:

- Full ROM
- Able to walk 1-2 miles or bike 30 minutes
- Increased strength
  - Hamstrings within 20% of uninvolved side
  - Quadriceps within 30% of uninvolved side
- Balance testing within 30% of uninvolved side

Treatment:

- Brace discontinued by week 6
  - Consider unloading brace
- Weight Bearing
  - Progress to Weight Bearing As Tolerated
  - Full Weight Bearing by week 6-8
  - Discontinue crutches Week 8
- Gradual increase in ROM
- Maintain full Passive knee extension
- Progress knee flexion to 120-135° by week 8
- Continue patellar mobilizations
- Continue LE stretching program
- Initiate weight shifts at week 6
- Initiate mini squats 0-45° by week 8



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- Closed kinetic chain exercises (leg press)
- Toe-calf raises by week 8
- Open kinetic chain knee extensions (progress 1# per week)
- Progress resistance and time on Exercise bike
- Treadmill walking week 10-12
- Balance and proprioception drills. Progress static to dynamic
- Initiate front and lateral step ups and wall squats by week 8-10
- Modalities for pain and swelling control
- Biofeedback and muscle stim as needed
- Continue pool
- Continue slow steady progressions into functional activities
- Increase standing and walking tolerances

### **Phase 3**

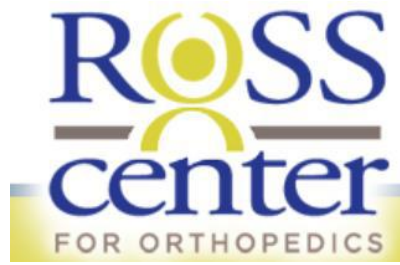
Postoperative Weeks 12-26

Goals:

- Full ROM without pain
- Strength within 80-90% of uninvolved side
- Balance/stability within 75-80% of uninvolved side
- Functional activities without increase in any symptoms.

Treatment:

- Full ROM
- Leg Press 0-90°
- Bilateral squats 0-60°
- Unilateral step-ups progressing from 2" to 8"
- Forward lunges
- Walking program
- Open kinetic chain knee extension 0-90°
- Bicycle, stairmaster, elliptical, treadmill
- Swimming
- Return to all functional activities
- Initiate Home Maintenance Program (week 16-20)
  - Bicycle
  - Progressive walking program
  - Pool program



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- SLR 4 directions
- Wall squats
- Front lunges
- Step ups
- LE stretching program

### **Phase 4**

Postoperative Week 26-52

Goals:

- Return to full unrestricted functional activity

Treatment:

- maintenance program 3-4 times a week
- Progress resistance to all strengthening exercises
- Progress to agility and dynamic balance drill
- Plyometric activity based on patient need
- Sports specific training
- Return to sports:
  - Low impact sports routinely around month 6 post op
  - Medium impact sports months 8-9 for small lesions and 9-12 for larger lesions.
  - High impact sports months 12-18