MPFL or Extensor Mechanism Or Patella Procedures

Rehab Protocol

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AAHS OUTPATIENT PHYSICAL THERAPY
Office: (443) 481-1140
<table>
<thead>
<tr>
<th>TIMELINE</th>
<th>GOALS</th>
<th>EXERCISES/METHODS</th>
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<tbody>
<tr>
<td>Early Post-operative</td>
<td>Limit knee ROM as described right</td>
<td>Quad sets</td>
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<tr>
<td>Day 1 - week 6</td>
<td>Protection of post-surgical knee</td>
<td>4 way leg lifts with brace</td>
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<td>Single leg stand control</td>
<td>Ankle pumps</td>
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<td></td>
<td>Good quad control without pain</td>
<td>Gait drills</td>
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<td></td>
<td>Single leg balance greater than 15 seconds</td>
<td>Balance and proprioception</td>
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<td>Functional single plan closed chain movements</td>
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<td></td>
<td></td>
<td>Avoid medial and lateral patellar mobilizations in first 2 weeks</td>
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<td>MPFL Only:</td>
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<tr>
<td></td>
<td></td>
<td>• Heel and toe raises after 2 weeks</td>
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<td></td>
<td></td>
<td>• TKE’s</td>
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<td></td>
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<td>• Step ups</td>
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<tr>
<td>Milestones to reach</td>
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<tr>
<td>by end of week 6:</td>
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<tr>
<td>• Full knee extension</td>
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<td>• Knee flexion &gt; or = 90 degrees</td>
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<td>• SLR without quad lag</td>
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**Phase II**

**Week 6- Week 12**

<table>
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<tr>
<th>Normal gait without crutches</th>
<th>Avoid closed chain exercises on landing past 90 degrees knee flexion</th>
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<tbody>
<tr>
<td>No joint effusion</td>
<td>Squats</td>
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<td>Improvement of quad, hip, balance, and proprioception</td>
<td>Leg press</td>
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<tr>
<td>Single leg balance with 30 degree knee flexion greater than 15 seconds</td>
<td>Closed chain strengthening in multiple planes</td>
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<td>Pain free squats and lunge</td>
<td>Staionary bicycle</td>
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<td></td>
<td>Lungen</td>
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<td></td>
<td>Proprioception exercises</td>
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<td>Alter G/ treadmill running progression (No sooner than 8 weeks)</td>
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<td>Hip and core strengthening</td>
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**BRACING**

- Immobilizer 2 weeks
- After 2 weeks– Then:
  - Fracture/Quad Tendon/Patella Tendon/Tubercle Transfer—
    - IROM Brace
      - Week 3: 0-30
      - Week 4: 0-50
      - Week 5: 0-70
      - Week 6: 0-90
      - Week 7+: Full
  - MPFL/Lateral Release/Reefing
    - IROM 0-90 until week 6

**ROM RESTRICTIONS**

- Follows Brace Restrictions

**WEIGHT BEARING**

- NWB for 4 weeks
- 25-50% Week 5
- 50-75% week 6
- 100% after 6 weeks
- MPFL can WBAT at 2 wks

**OTHER RESTRICTIONS AND KEY CONSIDERATIONS**

- Quad Tendon/Patella Tendon/ Tubercle transfer/patella fracture
  - No Active extension for 6 weeks
- MPFL/Reefing/Lateral Release
  - No lateral mobs for 4 weeks
### Milestones to reach by end of week 12:
- Normalized gait without assistive device
- Full pain free ROM
- Min to no swelling

### Phase III
**Week 12-Week 18**
- Success with sport specific training
- Successful completion of return to sport testing criteria
- Multiplane dynamic neuromuscular control without pain, instability, or swelling
- Plyometrics with progression from 2 feet to one foot (16 weeks)
- Sports specific training
- Progression of previous exercises

### Week 18+
- Return to sport pending MD approval

### SHOWERING
1. May Shower day 1 after surgery
2. Must “waterproof” surgical site for 5 days after surgery
3. No submerging wounds for 4 weeks

### WOUND CARE
1. Remove everything except steri strips the day after surgery
2. Place clean gauze or op-site on wounds daily for 5 days

### MEDICATIONS
1. Pain medicine only as needed. Wean off as soon as possible
2. Don’t over-use NSAIDS
3. Aspirin 325mg daily for 1 month for DVT prophylaxis

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**The Orthopaedic and Sports Medicine Center LLC**
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# RETURN TO PLAY CRITERIA

| Pre-RTP Criteria before testing can commence | Full AROM  
Resolution of pain  
No/Trace joint effusion present  
MMT grossly 5/5 strength in LE  
LEFS: ≥ 75/80 (95%)  
Lysholm Knee Rating: ≥ 95%  
1RM SL Leg Press ≥ 90% contralateral side  
1RM SL Hamstring Curl ≥ 90% contralateral side  |
|---|---|
| **Lower Limb Symmetry Index (LSI):** LSI % (mean score of 3 trials on injured limb/ mean score of 3 trials on uninjured limb) x 100 | SL Hop: ≥ 90%  
SL Triple Hop: ≥ 90%  
SL 6 meter Timed Hop: ≥ 90%  
SL Cross-over Hop: ≥ 90%  
Overall Score: ≥ 90% |
| **Vail Sports Tests:** | Passing Score ≥ 46/54 (85%) |
| **Tuck Jump Assessment (TJA):** | perfect score on the TJA or improvement of 20 percentage points from the initial score |
| **Single Leg Squat: No Errors in Form (Errors listed right)** | Arm strategy: removal of hand off the waist  
Trunk alignment: leaning in any direction  
Pelvis plane: loss of horizontal plane  
Knee position: tibial tuberosity medial to second toe or tibial tuberosity medial to medial border of foot  
Steady stance: subject stepped down on non-tested limb, or foot wavered from side-to-side |
| **Modified Star Balance Excursion Test (Y Balance Test):** | SEBT % = (mean score of 3 trials in anterior distance + mean score of 3 trials in posterior lateral distance + mean score of 3 trials in posterior medial distance)/ leg length of stance limb) x 100. Passing Score ≥ 94% |
| **Core Testing: (ongoing research): ≥ 90% of all standard timed tests:** | Right Single Leg Bridge: Men 95 seconds; Females 75 seconds  
Left Single Leg Bridge: Men 99 seconds; Females 78 seconds  
Flexor Endurance Test: Men 136 seconds; Females 134 seconds  
Extensor Endurance Test: Males 160 seconds; Females 185 seconds  
Lower Abdominal Muscle Testing: Males 5/5; Females ≥ 4/5 (75°=3/5, 60°=3+5, 45°=4-/5, 30°=4/5, 15°=4+/5, 0°=5/5) |

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**RTP INSTRUCTIONS**

RTP evaluation can progress throughout treatment as appropriate.

**PRE-RTP**

Complete all testing in Pre-RTP section. Only Continue on when able to pass.

**SESSION 1**

LSI, Vail Sports, TJA

**SESSION 2**

Single leg squat, Y Balance, Core Testing