**Physical Therapy Post-Operative Guidelines**
**Lateral Retinacular Lengthening**

### Phase I: 0-2 Weeks

**Precautions:** No patellar mobilizations; No OKC quad through arc of motion

<table>
<thead>
<tr>
<th>Weight Bearing</th>
<th>Brace</th>
<th>ROM</th>
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</table>
| • WBAT with brace | • Wear when up locked at 10° KF  
• Use crutches only for comfort and symptom control | • 0-60° KF progressively; AAROM, emphasize full extension  
• Do NOT force into painful end range KF – pain level 3/10 or less |

**Therapeutic Exercises and Activities**
- Establish high quality quad set  
  *Promote superior translation of patella with contraction  
  *Avoid co-contraction with hamstrings or proximal hip musculature  
  *Utilize NMES as needed  
- SLR x 4  
  *Flexion: begin in standing → reclined standing → supine  
  -Progress per quad control, no extensor lag  
  *Abduction, Adduction, Extension  
- Beginner mat exercises for abdominal/lumbopelvic control and proximal hip strength  
- Calf raises

**Goals:** Quad set WNL; SLR without lag, ROM to 90°; Joint effusion resolving

### Phase II: 2-6 Weeks

**Precautions:** Observe and correct for knee/hip alignment (functional valgus at knee and pelvic drop) with squatting and SLS activities; NO OKC strengthening through arc of motion x 6 weeks; Avoid end range quadriceps stretching until 8+ weeks post op; Do not encourage reciprocal stair climbing until adequate quad strength present

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| • FWB with/without brace per quad control | • Gradually open for gait per quad control; discontinue when quad strength is sufficient | • 0-120° KF progressively  
• Full extension  
• Stationary bike |

**Therapeutic Exercises and Activities**
- Double legged partial squats to 45° KF max with support or light leg press with double limb  
- Marching with balance moment  
- Initiate L/E proprio/balance drills: single limb per control/tolerance  
- Initiate bridging and planks  
- Increase repetitions w/proximal hip strength and abdominals

**Goals:** Effusion resolved; Preserve full extension; Flexion ROM ≥120°; Normal gait pattern with progressive speed and distance as tolerated; Normal LE kinematics w/2 legged CKC activities; Multi-planar hip strength = MMT grade 5/5; Normal stair climbing
### Phase III: 6-12 Weeks

**Precautions:** Observe and correct for knee/hip alignment in single leg squatting and functional movement patterns

<table>
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<tr>
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<th>ROM</th>
</tr>
</thead>
<tbody>
<tr>
<td>• FWB with normal gait pattern</td>
<td>• Protective use when out of home: environmental hazards, crowds</td>
<td>• Full, symmetrical ROM</td>
</tr>
</tbody>
</table>

**Therapeutic Exercise and Activities**

- Initiate low impact cardio (15-20 min, minimal intensity – bike, walk, elliptical)
  - *Initiate cardio only if ROM, quad control, and symptoms are progressing well
- Progress CKC drills (step, lunge, leg press)
  - Deeper angles KF (≥45°) w/2 limb support as tolerated
  - Early KF angles (0-45°) w/1 limb per control/tolerance
- Increase workload with 2 legged CKC drills
  - Resistance with 2 legged squatting
  - Progress depth with single limb (step, lunge, leg press)
  - *Initiate large muscle group weight training (HS curls, calf raises, deadlift, etc.)
- Progress L/E proprio/balance drills: surface challenge, directional reaching, stepping

**Goals:** Able to perform 2 legged squat ≥60° KF x 20 reps w/kinematic and symptom control; Restore normal mechanics with single leg CKC L/E activities; Able to maintain single leg balance ≥60 seconds; Restore normal stair climbing

### Phase IV: 12-16+ weeks*

**Precautions:** Observe and correct for soft, low squat landing with plyos maintaining good alignment at pelvis and knee; caution regarding patellar tendinitis with progression of routine

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<tbody>
<tr>
<td>• FWB, no restrictions</td>
<td>• Discontinue</td>
<td>• Full, symmetrical ROM</td>
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</table>

**Therapeutic Exercise and Activities**

- Progress resistance with 2 legged/1 legged strengthening drills
- Introduce directional shuffling and agility footwork
- Progress low impact cardio per symptoms; increase one variable at a time (intensity level, intervals, duration) – 15-20 min min minimal intensity, steady pace
- Initiate return to run program if criteria met (see addendum)
  - *Observe for any increase in effusion or knee pain >24 hours post workout – reduce running program intensity or frequency in response

**Goals:** Quad girth and strength returning; Good tolerance for normal walking speed and distance; Able to perform 2 legged squat to 90° KF x 20 reps & 1 legged squat ≥45° KF x 20 reps with kinematic and symptom control

*Timeframes in later phases of rehabilitation are estimates only. Patients may be progressed faster/slower based on their ability to attain goals for each phase.*

*Please reference Return to Sport or High Physical Demand Occupation Protocol for return to further advanced activities*