

Lateral Retinacular Release

Week One	Weeks Two To Four
Initial Evaluation	Evaluate
<ul style="list-style-type: none"> ➤ Range of motion ➤ Joint effusion ➤ Ability to contract quad/vmo ➤ Gait (WBAT in PF brace) ➤ Assess foot/ankle for biomechanical optimization ➤ Patella Mobility ➤ Inspect for infection/signs of DVT ➤ Assess RTW and sport expectations 	<ul style="list-style-type: none"> ➤ Range of Motion ➤ Joint effusion ➤ Patella position/mobility ➤ Balance/single leg stance ➤ Gait
Patient Education	Patient Education
<ul style="list-style-type: none"> ➤ Support Physician prescribed meds ➤ Ensure compliance w/ pre-op hep ➤ Reinforce use of assistive device if needed ➤ Discuss frequency and duration of treatment (2-3x/wk is expected for 8 weeks) 	<ul style="list-style-type: none"> ➤ DC brace with good quad contraction and no lag during gait ➤ DC crutches as gait pattern allows
Therapeutic Exercise	Therapeutic Exercise
<ul style="list-style-type: none"> ➤ Review and update pre-op hep (heel slides, ankle pumps, quad sets, towel stretch) ➤ Should consider Isometrics with NMES if poor quad control ➤ Hold aquatics until week 2 and ensure incision closure 	<ul style="list-style-type: none"> ➤ Initiate bicycle (do not force flexion) ➤ Initiate isotonic strengthening, progressing to partial/assisted squatting activity, and forward step up ➤ Single leg balance on a stable surface, progress to unstable surfaces ➤ Closed chain aquatics (gait forward, backward, sideways calf raises, clap under, mini squats) ➤ Open chain aquatics (bicycling, splits/spreads) ➤ Consider use of Hydrocuffs for flexibility
Manual Techniques	Manual Techniques
<ul style="list-style-type: none"> ➤ Grade I and II patella mobilizations (focus on medial glide) ➤ PROM as tolerated (focus on extension) 	<ul style="list-style-type: none"> ➤ Grade III-IV patella mobilization (if needed) ➤ Posterior capsule mobilization (if needed) ➤ Incisional mobilization
Modalities	Modalities
<ul style="list-style-type: none"> ➤ NMES/Interferential/biofeedback/ice as needed 	<ul style="list-style-type: none"> ➤ Modalities may be used as needed
Goals	Goals
<ul style="list-style-type: none"> ➤ Control pain ➤ Reduce joint effusion ➤ Restore normal quad contraction ➤ Gain full knee extension 	<ul style="list-style-type: none"> ➤ 0-120 degrees ROM ➤ Minimal effusion ➤ Normal gait with no device on flat level surfaces

Weeks Four To Eight	Eight To Discharge
Evaluate	Evaluate
<ul style="list-style-type: none"> ➤ Asses trunk stability ➤ Assess and correct squat pattern ➤ Strength of hip/knee musculature 	<ul style="list-style-type: none"> ➤ Functional testing for LE comparison provided upon physician request ➤ Address any deficits that may limit return to work or sport goals ➤ HEP compliance
Therapeutic Exercise	Therapeutic Exercise
<ul style="list-style-type: none"> ➤ Progress to squat, lunge, step up activity as appropriate ➤ Single leg isotonic exercises ➤ Progress balance activity to single leg dynamic activity and unstable surfaces ➤ Progress to closed chain exercises on unstable surfaces ➤ Closed chain aquatics: Progress with dynamic movement patterns (walking lunges, step ups, side step squats) ➤ Continue open chain aquatics ➤ Consider use of fins for resistance training 	<ul style="list-style-type: none"> ➤ Transition to land based exercise unless continued aquatics indicated ➤ Cardiovascular training (bike, swim and elliptical) ➤ Sports specific exercises ➤ Complete agility, running, and plyometric activity with full motion, Normal manual muscle test, and MD approval ➤ Encourage participation in the CFA
Manual Techniques	Manual Techniques
<ul style="list-style-type: none"> ➤ Any as indicated 	<ul style="list-style-type: none"> ➤ Any as indicated
Modalities	Modalities
<ul style="list-style-type: none"> ➤ Any as Indicated 	<ul style="list-style-type: none"> ➤ Any as Indicated
Goals	Goals
<ul style="list-style-type: none"> ➤ Normal gait all surfaces ➤ Normal ROM ➤ No pain with ADL's 	<ul style="list-style-type: none"> ➤ Minimal to no pain ➤ 5/5 muscle strength ➤ Discharge to full work or sport

References:

1. Felli L, Capello AG, Lovisolo S, Chiarlone F, Alessio-Mazzola M. "Goldthwait technique for patellar instability: surgery of the past or here to stay procedure? A systematic review of the literature." *Musculoskelet Surg*. 2019 Aug;103(2):107-113.
2. Villalta, E. M., Peiris, C. L. (2013). "Early aquatic physical therapy improves function and does not increase risk of wound-related adverse events for adults after orthopedic surgery: a systematic review and meta-analysis." *Arch Phys Med Rehabil*, 94(1): 138–148.
3. Tan SHS, Chua CXX, Doshi C, Wong KL, Lim AKS, Hui JH. "The Outcomes of Isolated Lateral Release in Patellofemoral Instability: A Systematic Review and Meta-Analysis." *J Knee Surg*. 2019 May 25. doi: 10.1055/s-0039-1688961. [Epub ahead of print]

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