



Medial Patellofemoral Ligament Reconstruction

Postoperative Therapy Plan

Date of Surgery: _____

Details of Surgery: _____

Surgeon: _____

Next Follow Up with MD/PA: _____

Additional Info: _____

Restrictions/Precautions:

WB Precautions:

- WBAT in brace

Brace:

- Locked in extension x 4 weeks
- 4 weeks postop: Unlock 0-30°
- 5 weeks postop: Unlock 0-60°
- 6 weeks postop: Unlock 0-90°
- 7 weeks postop: Wean out of brace

Other Precautions:

- ROM limited from full extension to 90° in NWB position x 4 weeks
- Weeks 4-6: ROM limited from full extension to 120° in NWB position
- Avoid lateral patellar glides until 6+ weeks
- Hold bike x 4 weeks

Important Notes:

1. Weeks and months are designated in their relationship to the postoperative timeline in the grids below (e.g. Week 1 indicates postoperative days 0-7).
2. If a precaution/restriction is listed x 4 weeks it indicates **a full 4 weeks**, so it is lifted after day 28.
3. Notes above supersede any notes in the grid below, as they indicate the surgeon's preferences for this individual patient and the circumstances of their surgery.

Phase 1: Acute Postop (Weeks 0-3)	
PRECAUTIONS	<ol style="list-style-type: none"> 1. Brace locked in extension x 4 weeks, WBAT 2. ROM limited from full extension to 90° in NWB position x 4 weeks. 3. Avoid lateral patellar glides 4. Hold bike x 4 weeks
Rehab Focus	<ul style="list-style-type: none"> • Graft protection • Pain and swelling reduction • Knee mobility: hyperextension to 90° • Quad activation • Gait training in braced locked into extension WBAT • Patient education
Interventions to Consider	<p><u>Pain and swelling:</u></p> <ul style="list-style-type: none"> - Ice, compression, elevation, ankle pumps <p><u>Mobility:</u></p> <ul style="list-style-type: none"> - PROM of knee into flexion (to 90°) and extension, attention to hyperextension - AROM into flexion (to 90°) and extension - Low intensity, long duration stretches (eg. heel prop) <p><u>Strength/Activation:</u></p> <ul style="list-style-type: none"> - Quad sets progressing to SLR without lag - NMES - BFR encouraged if appropriate <p><u>Gait:</u></p> <ul style="list-style-type: none"> - WBAT with brace locked in extension
Criteria for Progression to Phase 2: ____ AROM 0-90° in NWB positions ____ SLR without extension lag	

Phase 2: Subacute Postop (Weeks 4-7)	
PRECAUTIONS	<ol style="list-style-type: none"> 1. <u>Weeks 4-6:</u> NWB ROM limited from full extension to 120° 2. <u>4 weeks:</u> Brace unlocked 0-30°, WBAT 3. <u>5 weeks:</u> Brace unlocked 0-60°, WBAT 4. <u>6 weeks:</u> Brace unlocked 0-90°, WBAT 5. <u>7 weeks:</u> Wean out of brace.
Rehab Focus	<ul style="list-style-type: none"> • Graft protection • Pain and swelling reduction • Knee mobility: hyperextension progressing to full per guidelines • Quad endurance • Gait training with progressive knee flexion in brace, eventually without brace • Proprioception

Interventions to Consider <i>Continue previous interventions as appropriate</i>	<u>Mobility:</u> <ul style="list-style-type: none"> - Continued attention to knee hyperextension - Progressive knee flexion - Stationary bike without resistance <u>Strength+ endurance:</u> <ul style="list-style-type: none"> - BFR encouraged if appropriate, attention to quad engagement/endurance - Introduce CKC exercises in pain free range with brace - Progress proximal (hip + core) strength/endurance - SL step ups <u>Neuromuscular Re-Education:</u> <ul style="list-style-type: none"> - Proprioception + single leg stability <u>Gait:</u> <ul style="list-style-type: none"> - Work toward even WB without compensation in brace at 6 weeks - Attention to TKE integration into gait, ample swing limb clearance - Initiation of reciprocal stair climbing <u>Cardio:</u> <ul style="list-style-type: none"> - Stationary bike without resistance, may initiate elliptical - Initiation of swimming or pool walk/jog if incisions fully closed
Criteria for Progression to Phase 3: <ul style="list-style-type: none"> ___ Symmetric extension AROM ___ SLR x 20 without extension lag ___ FWB without gait deviation Important Milestones: <ul style="list-style-type: none"> ___ Flexion AROM within 80% of uninvolved ___ Pain free DL squat to 60° with symmetric loading 	

Phase 3: Late Postop (Weeks 8-12)	
Rehab Focus	<ul style="list-style-type: none"> • Graft protection • Functional movement optimization • Strength progression to SL: extensive attention to knee mechanics • Neuromuscular control + endurance
Interventions to Consider <i>Continue previous interventions as appropriate</i>	<u>Mobility:</u> <ul style="list-style-type: none"> - Knee ROM normalized <u>Strength:</u> <ul style="list-style-type: none"> - PREs for LE strengthening - Progress SL CKC loading with attention to mechanics <u>Neuromuscular Re-Education:</u> <ul style="list-style-type: none"> - Proprioception + single leg stability:

	<ul style="list-style-type: none"> Progress to include ball tosses, neurocognitive challenges as appropriate <p><u>Cardio:</u></p> <ul style="list-style-type: none"> Continued cycling, swimming, elliptical
<p>Criteria for Progression to Phase 4:</p> <ul style="list-style-type: none"> _____ Maintain symmetric extension ROM _____ Minimal to no joint effusion with activity _____ Pain free DL squat to 90° with optimal mechanics <p>Important Milestones:</p> <ul style="list-style-type: none"> _____ Flexion AROM normalized _____ SL stance x 60 sec without LOB, prevention of genuvalgum 	

Phase 4: Progressive Functional (Months 3-4)	
Rehab Focus	<ul style="list-style-type: none"> SL strength + endurance Eccentric control Light impact acceptance + mechanics
<p>Interventions to Consider</p> <p><i>Continue previous interventions as appropriate</i></p>	<p><u>Strength:</u></p> <ul style="list-style-type: none"> Continued progression of quad, hamstring, proximal strength + control Increased emphasis on SL loading <p><u>Functional Training:</u></p> <ul style="list-style-type: none"> Continue SL stability progression: <ul style="list-style-type: none"> Reaches outside of BOS, ball tosses, neurocognitive challenges as appropriate Initiate submax sagittal plane hop progression with attention to mechanics: <ul style="list-style-type: none"> DL symmetric > DL asymmetric > SL hop <p><u>Cardio:</u></p> <p>Continued cycling, swimming, elliptical</p>
<p>Criteria for Progression to Phase 5:</p> <ul style="list-style-type: none"> _____ SL squat x 10 with optimal mechanics _____ LQYBT composite ≥ 75% <p>Important Milestones:</p> <ul style="list-style-type: none"> _____ Knee Flexion ROM within 5° of uninvolved _____ HS and Quad strength ≥ 75% LSI _____ Optimal mechanics with SL hopping in place x 30 	

Phase 5: Initial Sport Specific (Months 4-5)	
Rehab Focus	<ul style="list-style-type: none"> Strength progression Power development, plyometric progression and mechanics Initiate return to run progression Multidirectional movement control

<p>Interventions to Consider</p> <p><i>Continue previous interventions as appropriate</i></p>	<p><u>Strength:</u></p> <ul style="list-style-type: none"> - Continued progression of quad, hamstring, proximal strength + control - SL strength and stability with increased load <p><u>Power + Plyometrics:</u> with attention to mechanics:</p> <ul style="list-style-type: none"> - Moderate intensity - Progress power & eccentric control - Progress speed of force generation <p><u>Sport Specific Prep:</u></p> <ul style="list-style-type: none"> - Increase difficulty of neurocognitive tasks - Initiate running progression if: <ul style="list-style-type: none"> - Quad strength: $\geq 70\%$ LSI - Optimal mechanics with SL hopping in place x 1 min - 30+ SL squat in 1 min to 30°-45° knee flexion with optimal mechanics - WNL running mechanics in in clinic trial - Month 5: Initiate deceleration activities, lateral hops with optimal mechanics <p><u>Cardio:</u></p> <ul style="list-style-type: none"> - Continued cycling, swimming, elliptical - Initiate progressive return to run program as appropriate
<p>Criteria for Progression to Phase 6:</p> <p>____ HS & Quad Strength $\geq 80\%$ LSI</p> <p>____ LQYBT asymmetry < 6 cm (A, PL, & PM) & $\geq 90\%$ Composite</p> <p>____ Good tolerance & optimal mechanics with DL and SL hopping</p> <p>Important Milestones:</p> <p>____ Quad strength >70% BW</p> <p>____ HS strength >50% BW</p>	

Phase 6: Return to Sport Prep (Months 6-9)	
<p>Rehab Focus</p>	<ul style="list-style-type: none"> • Optimize physical performance, power, and capacity • Symmetrical strength and power • Sport specific movements and patterns • Patient confidence in return to sport
<p>Interventions to Consider</p> <p><i>Continue previous interventions as appropriate</i></p>	<p><u>Strength:</u></p> <ul style="list-style-type: none"> - Continued progression of quad, hamstring, proximal strength + control - Functional loaded strengthening progressions <p><u>Sport Specific:</u></p> <ul style="list-style-type: none"> - High intensity sport specific movement re-training, sport specific drills - Power and plyometric under fatigued conditions, neurocognitive demands <p><u>Cardio:</u></p> <ul style="list-style-type: none"> - Continued cycling, swimming, elliptical, running

Criteria for Return to Sport: See SLHS Return to Sport Testing Protocol

- ☐ LQYBT composite $\geq 95\%$
- ☐ Hop Testing LSI $\geq 95\%$
- ☐ Quad and Hamstring LSI $\geq 95\%$
- ☐ Hamstring to Quad ratio $\geq 67\%$
- ☐ Quad Torque $\geq 3\text{Nm/Kg}$

Follow up with surgeon regarding official return to sport status. Most literature indicates that 7-9 months postop is the optimal timeline for return to sport.