ACL BTB Autograft, Medial Meniscus Ramp Repair

TWIN CITIES ORTHOPEDICS

Name: _____

Dr: Dr. Christ LaPrade Date: _____

ROM RESTRICTIONS

0-90 for 2 weeks

BRACE SETTINGS

Immobilizer until SLR x 20 (no lag)

WEIGHT BEARING STATUS

WBAT with KI or brace for 6 weeks

TIMELINES

Week 11-7POD)
Week 2(8-14POD)
Week 3(15-21POD)
Week 4(22-28POD)

●= Do exercise for that week **Week**

Initial Exercises	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**12**	**16**	**20**	**24**
Ankle Pumps & nerve glides	●	●	●	●	●	●	●	●						
Patella/Tendon mobilization	●	●	●	●	●	●	●	●						
Extension heel prop	●	●	●	●	●	●	●	●						
Calf & hamstring stretching	●	●	●	●	●	●	●	●						
Seated knee flexion ROM	Immediate AROM progression (various positions/strategies)													
ROM GOALS	Full KE & ≈90° KF by 2 weeks, 120° KF by 6 wks, Full KF by 10 wks													
Quad strength progressions	0° & 60° ISOs, SLR, Resisted TKE					Gradual PRE with LAQ								
QUAD STRENGTH GOALS	20 SLR w/ no lag by 2 weeks | 70% LSI by 16 weeks, 80% LSI by 24 weeks | 90% LSI & >80% torque/BW by 36 weeks													
Multi-direction Hip Strength	●	●	●	●	●	●	●	●						
Hamstring strength progressions	ISOs & hip-based hinging									Resisted curling ok				
Bridging	Straight legs over ball					Progress classic bridging as tolerated								
Cardiovascular Exercises	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**12**	**16**	**20**	**24**
Well leg & upper body exercise		●	●	●	●	●	●	●	●	●	●	●	●	●
Stationary Bike		●	●	●	●	●	●	●	●	●	●	●	●	●
Elliptical, Walking				●	●	●	●	●	●	●	●	●	●	●
Stair stepper, Rower					●	●	●	●	●	●	●	●	●	●
Swim – flutter kick						Allow per incision healing status								
***NOTE FOR CARDIO**	Must tolerate daily walking with no limp & no significant increase in pain/swelling prior to initiating WB cardio (walk, elliptical, stepper)													
Weight Bearing Strength	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**12**	**16**	**20**	**24**
Crutch weaning	●	●												
Calf raises in KE & KF		●	●	●	●	●	●	●	●	●	●	●	●	●
Marching into SLS		●	●	●	●									
SLS balance progressions			●	●	●	●	●	●	●	●	●	●	●	●
2 leg squat/Leg Press (2→1 leg)			ISOs, ≤45°			≤70°			Progress depth, load, intensity as tolerated					
Shift & hold isometric over step														
Lunge & step-up/down progressions														
Band resisted directional stepping						●	●	●	●	●	●	●	●	●
Agility Exercises	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**12**	**16**	**20**	**24**
Return to run guidelines	≥16 weeks post-op, YBT-Anterior ≤8 cm SSD, walk ≥1 mile no limp/no pain, Quad strength ≥70% LSI, ≥60% peak torque/BW													
Agility (single→multi-planar)												●	●	●
Sport Performance (TRAC) Test	Baseline test: 4 months, F/u test: 7 & 10 months													
High Level Activities	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**12**	**16**	**20**	**24**
Recreational activity progressions													●	●
Sport Re-entry progressions														●

****NMES & BFR Encouraged (per any contraindications)****

Abbreviations	(ISO) isometric, (KF) knee flexion, (LAQ) long arc quad, (PRE) progressive resistance exercise, (SLR) straight leg raise, (TKE) band-resisted terminal knee extension
Precautions	70° squat depth limit x 2 months, Avoid aggressive HS curling x 2 months, close symptom observation with direction change, impact, deeper squatting (d/t meniscal involvement)

POST-KNEE SURGERY RETURN TO ACTIVITY GUIDELINES/CRITERIA	
Return to run guidelines	≥16 weeks post-op, YBT-Anterior ≤8 cm SSD, walk ≥1 mile no limp/no pain, Quad strength ≥70% LSI, ≥60% peak torque/BW
Return to jump guidelines	≥20 weeks post-op, YBT(A) ≤4 cm SSD, Quad strength ≥80% LSI, ≥80% peak torque/BW, tolerate hopping/skipping drills with no increased soreness/swelling, tolerate lunge/squat/step single leg training progressions
Return to sport guidelines	In addition to TRAC testing goals (listed below), patient must achieve the following: >9 months post-op 16+ weeks progressive strength training 10+ weeks neuromotor training program 6+ weeks within-sport practice progression (per MD/PT team clearance) 3+ weeks graduated return to competition (per MD/PT team clearance)

POST-KNEE SURGERY "TRAC" PHYSICAL PERFORMANCE TESTING - TIMELINES & GOALS			
TRAC Test Activity	**4 Month Goals**	**7 Month Goals**	**10 Month Goals**
Knee Extension ROM	≤5° SSD	≤0° SSD	≤0° SSD
Knee Flexion ROM	≤10° SSD	≤5° SSD	≤0° SSD
YBT(A) Squat SSD	≤8 cm SSD	≤4 cm SSD	≤4 cm SSD
Max YBT(A) squat depth relative to LL	*≥55% of LL*	*≥70% of LL*	*≥70% of LL*
Repeated single leg squat (one leg rise test)	25 reps to 60° KF	25 reps to 90° KF	25 reps to 90° KF
2 leg squat symmetry (over force plates)	≤10% off-shift	≤5% off-shift	≤5% off-shift
Hip ABD strength LSI	≥80% LSI	≥90% LSI	≥90% LSI
Hip ABD strength relative to BW	*≥20% of BW*	*≥25% of BW*	*≥30% of BW*
Quad strength LSI	≥70% LSI	≥80% LSI	≥90% LSI
Quad strength relative to BW	*≥70% of BW*	*≥80% of BW*	*≥90% of BW*
Hamstring strength LSI		≥75% LSI	≥90% LSI
Single leg hop (SLH) test LSI		≥80% LSI	≥90% LSI
SLH distance relative to LL (norm comparison)		*≥80% of norms*	*≥90% of norms*
Triple hop test LSI		≥80% LSI	≥90% LSI
Triple hop distance (norm comparison)		*≥80% of norms*	*≥90% of norms*
2 leg jump (off shift at take-off/landing)		≤20% off shift	≤10% off shift
Peak knee flexion angle SSD with hop landing		≤20° SSD	≤10° SSD

Abbreviations for both tables above: (ABD) abduction, (BW) body weight, (ISO) isometric, (LL) leg length, (LSI) limb symmetry index, (norm) age & sex-matched normative data, (PRE) progressive resistance exercise, (ROM) range of motion, (SLR) straight leg raise, (SSD) side to side difference, (TRAC) testing to return to athletic competition, (UE) upper extremity, (YBT(A)) Y-balance test anterior reach