

POST OPERATIVE ACL RECONSTRUCTION WITH MENISCUS REPAIR

	Approx. Time Frame	ACTIVITY	GOALS
PHASE I	0-2wks	<p>WB STATUS: TTWB x 6 wks.</p> <p>BRACE: Week 0-3: 0°-50°; Week 3-6: 0°-90° Locked @ 0° at night and ambulation</p> <p>ROM: Week 0-3: 0°-50°; Week 3-6: 0°-90°</p> <p>MANUAL: No scar massage until 4-6weeks Gentle STM to reduce edema/soreness/stiffness above and below knee PRN</p> <p>EXERCISE SUGGESTION: ROM</p> <ul style="list-style-type: none"> - <u>Extension:</u> LLLD stretching (~5min); e.g. heel prop, prone hang minimizing co-contraction and nociceptor response AVOID HYPEREXTENSION - <u>Flexion:</u> P/AA ROM exercises, as permitted by post-op restrictions. No forced PROM. - <u>Patella mobilization:</u> (medial/lateral initially followed by superior/inferior while monitoring reaction to ROM and effusion) <p>Muscle Activation/Strength</p> <ul style="list-style-type: none"> - Isometric quad sets (w/NMES PRN) - Multiplane SLR/OKC hip emphasizing no knee extension lag (avoid adduction with Grade II/III injury) - Standing theraband terminal knee extension (TKE) - Ankle pumps, heel raises/ankle strengthening <p>Cardiovascular</p> <ul style="list-style-type: none"> - UBE or similar exercise 	<ul style="list-style-type: none"> » Protect graft and graft fixation » Full <u>knee extension</u> ROM » Minimize pain » Minimize swelling » Normalize gait » Flexion ROM to MD guidelines » Good quadriceps control (>20° no lag SLR) <p>CRITERIA FOR PROGRESSION TO PHASE II</p> <ul style="list-style-type: none"> » 20 SLR w/ no extension lag » Normalize gait with crutches » ROM: ≤5° active extension lag
PHASE II	2-6wks	<p>WB STATUS: TTWB x 6 wks; Wean crutches @ 6 wks normal gait & SLR, ability to safely ascent/descend stairs</p> <p>BRACE: Week 0-3: 0°-50°; Week 3-6: 0°-90° Locked @ 0° at night and ambulation</p> <p>ROM: Week 0-3: 0°-50°; Week 3-6: 0°-90°</p> <p>MANUAL: Scar massage @ 4-6wks once healed. STM/MFR PRN Patella mobilization 0°/30°, <i>aggressive patella and anterior interval mobilization for BTB grafts</i></p> <p>EXERCISE SUGGESTION: ROM</p> <ul style="list-style-type: none"> - <u>Extension:</u> Continue LLLD exercises (assisted PRN) - <u>Flexion:</u> P/AA ROM exercises, as permitted by post-op Rx - <u>Flexibility:</u> static stretching all major muscle groups w/ consideration for graft and ROM precautions <p>Strengthening</p> <ul style="list-style-type: none"> - <u>Quadriceps:</u> quad sets, knee extension from 90° to 40° - <u>Hamstrings:</u> Hamstring activation/isometrics: <i>avoid loaded knee flexion to protect medial meniscus repair</i> - Hip/core/calf strengthening; OKC and CKC hip exercises - Progress ankle strengthening <p>Cardiovascular:</p> <ul style="list-style-type: none"> - UBE or similar exercise - Alter-G walking gait training ONLY. WB status >25% and with physician clearance. 	<ul style="list-style-type: none"> » Protect graft and graft fixation » Progress ROM » Improve muscle strength » Minimize Swelling » Progress neuromuscular reeducation » Progress off crutches if permitted by MD <p>CRITERIA FOR PROGRESSION TO PHASE III</p> <ul style="list-style-type: none"> » 0° -90° ROM » Minimal effusion/pain » Functional strength and control in ADL

	Approx. Time Frame	ACTIVITY	GOALS
PHASE III	7-12wks	<p>MANUAL: PRN to address ROM deficits/PF pain. Mobilize scars</p> <p>EXERCISE SUGGESTION:</p> <p>Strengthening</p> <ul style="list-style-type: none"> - Squats, Leg press, hamstring curl, knee extension 90° to 0°, step-ups/down, lunges, Sport cords, Wall squats <i>*Avoid squats/lunges >90°</i> - Neuromuscular training: Wobble board/rocker board/ roller board, Perturbation training, Instrumented testing systems, varied surfaces. <p>Cardiovascular</p> <ul style="list-style-type: none"> - Stationary bike progressing to outdoor biking @ 12-14 weeks - Elliptical trainer - Alter-G walking to normalize gait, progress to running - Deep pool running when incision are fully healed - Swimming, shallow pool running @ 12 weeks - Week 12: Swimming, shallow pool running 	<ul style="list-style-type: none"> » Minimal to no PF pain as strength training advances » Build quad and hamstring strength » 75% of LSI of quads, hams » 75% of LSI SL leg press » Proper single leg squat/dip x 10 reps <p>CRITERIA FOR PROGRESSION TO PHASE IV</p> <ul style="list-style-type: none"> » 75% LSI strength
PHASE IV	13-20wks	<p>EXERCISE SUGGESTION:</p> <p>Strengthening</p> <ul style="list-style-type: none"> - Advance strengthening, squat/lunge progression - Neuromuscular training: Wobble board/rocker board/ roller board, Perturbation training, Instrumented testing systems, varied surfaces. <p>Cardiovascular:</p> <ul style="list-style-type: none"> - High intensity low impact cardio to build fitness, lower intensity cardio for recovery - Alter-G for progressing loading <p>Running Progression:</p> <ul style="list-style-type: none"> - Basic linear and skipping drills, gradually advancing difficulty - Progress into running - 16-18 weeks: Linear acceleration/deceleration drills - 14-16 weeks: Walk/jog interval - 14-15 weeks: Basic ladder/linear drills w/ gradual advancement of difficulty <p>Jumping:</p> <ul style="list-style-type: none"> - 14-16 weeks: Double leg, low amplitude jumping - 16-20 weeks: Progress to single leg hop - Single response progressing to multiple response jumping 	<ul style="list-style-type: none"> » Protect PF joint » Initiate running » Control inflammation with increasing load/impact » Vertical jumping w/o difficulty » Normalize running gait » Single leg hop with 30-60 degree bend in landings with good valgus control <p>CRITERIA FOR PROGRESSION TO PHASE V</p> <ul style="list-style-type: none"> » Maximum vertical w/o pain or Instability » 90% LSI strength » Run 75% speed w/o difficulty
PHASE V	20-32wks	<p>EXERCISE SUGGESTION:</p> <p>Strength:</p> <ul style="list-style-type: none"> - Weight training 2-3x/week: volume continue increase resistance as tolerated - Perform strength training after running/agility OR on opposite days <p>Plyometrics:</p> <ul style="list-style-type: none"> - Progress based on sports demands, individual ability <p>RTS Progression:</p> <ul style="list-style-type: none"> - Unilateral agility drills, progressing to multi-directional - Begin position position and sport specific skills/drills - Non-reactive progress to reactive drills; Coach or PT directed 	<ul style="list-style-type: none"> » >90% LSI strength » >90% LSI hop tests » Sports specific training w/o pain, swelling, or difficulty » Consideration for meniscus repair with impact depth and training volume » Reconditioning for sports demands » Correct faulty movement with high level tasks
	RTS	<p>***FULL RETURN TO SPORT IS PATIENT SPECIFIC AND IS EXPECTED NO SOONER THAN 6-9 MONTHS***</p> <p>RETURN-TO-SPORT CRITERIA</p> <ul style="list-style-type: none"> » No functional complaints » Confidence when running, cutting, jumping at full speed » Completion of RTS testing @ 6+months » Return to practice with gradual progression to game play <p>PRACTICE/GAME PROGRESSION AFTER PASSING RTS TESTING</p> <ol style="list-style-type: none"> 1. Participation in all practice drills 2. Scrimmage participation with no contact 3. Scrimmage or game situation with contact, limited playing time 4. Full return to sport with increasing game minutes 	<p>RTS test may be modified per therapist's discretion based on patient's demographics and goals</p>