

PHASE I: Generally 0 - 6 weeks post-op	
PHASE I GOALS:	Protect surgical repair ROM: full knee extension, 90° knee flexion Regain adequate quadriceps control
PRECAUTIONS:	*Wear brace at all times (even while sleeping)* * NO open kinetic chain strengthening exercises* * NO running until 3-4 months post-op* * NO bending knee with load applied (i.e., squat, leg press, etc.) (Note: bending knee & partial weight bearing are allowed, <u>BUT</u> not at the same time)
CRUTCHES:	Begin with touch weight-bearing: progress gradually only when wearing brace locked at 0° <ul style="list-style-type: none">○ Wks 1: Partial weight-bearing @ 0-25% body weight○ Wks 2: Partial weight-bearing @ 25-50% body weight○ Wks 3: Partial weight-bearing @ 50-75% body weight
BRACE:	Locked at 0° extension for 6 weeks
WOUND:	Post-op dressing remains intact until post-op day #2 (~48 hours after surgery) May begin showering after post-op day #2 (no need to cover incision site) * Do NOT submerge knee in tub or pool for 4 weeks* Bilateral compression stockings for 3-7 days: unilateral use thereafter as needed Suture/staple removal @ 10-14 days per Ortho/PT
REHABILITATION:	Frequent use of cryocuff and/or ice with lower extremity elevated Begin patellar mobilizations (10 reps each direction TID) after suture/staple removal Begin scar massage after incision site sloughs/scar is formed
~Weeks 1-2	Calf pumping with tubing Heel slides - assisted as needed: within the limits of 0-90° Static quad sets (with estim until patient able to do 10 SLRs without extension lag) SLRs: All directions - may add light weight when pain free Supine passive extension with towel under heel Gentle hamstring stretching
~Weeks 3-4	Short arc quads - may add light weights as tolerated Seated ankle disk training Seated bilateral calf raises - progress to standing bilateral calf raises UBE and/or well leg cycle
~Weeks 5-6	Hamstring Curls - light weight in a painless ROM Beginning level pool exercises: only gait training & deep water jogging (No "whip" kicking)
FOLLOW-UP:	Physical Therapy: Weekly; Ortho: ~6 weeks post-op; Supervised rehab: 2-3 x per week
DOCUMENTATION:	Precautions, pain level, medications, modalities Observation: (incision sites) - Signs/symptoms of infection? Site healing well? Effusion? Neurovascular status: Distal pulses, motor and sensation intact? Presence of calf pain? Knee ROM & quadriceps function

PHASE II: Generally 7-12 weeks post-op	
PHASE II GOALS:	Normal gait and stair ambulation Full Knee ROM
PRECAUTIONS:	*Continue to wear brace at all times (except while sleeping)* * NO open kinetic chain strengthening exercises* * NO running until 4 months post-op*
CRUTCHES:	Progress gradually to full weight-bearing during weeks 7-8 post-op
BRACE:	Open to full ROM. Fit with hinged sleeve knee brace when effusion is minimal.
REHABILITATION:	*Continue phase I exercises as needed* Progress to the following exercises and increase intensity gradually when patient is ready (i.e., no increase in knee pain or effusion since the previous exercise session) *Note: all strengthening should be done with the brace on, starting with low weights, high repetitions, and in a painless ROM*
~7-8 weeks	Stationary bike for conditioning - begin with 5-10 minutes and progress gradually Gait training (cone walking, marching, retrowalking, exercise band, etc.) Progressive strengthening (calf press, leg press, squats (0-45°), HS curls) (first set: 30 repetitions, then 1 additional sets at the same weight to muscle failure) Step-ups
~9-10 weeks	General LE stretching (calf, HS, quads, HF, hip adductors) Progressive standing balance exercises (body blade, plyoball, platform training, etc.) (progress in duration, intensity, double leg to single leg, etc.) Progressive strengthening (calf press, leg press, squats (0-45°), HS curls, hip abd/add) (first set: 20 repetitions, then 2 additional sets at the same weight to muscle failure)
~11-12 weeks	Along with stationary bike, gradually add elliptical and/or stairmaster for conditioning Progressive pool program as tolerated
FOLLOW-UP:	PT: Bimonthly; Ortho: ~12 weeks post-op; Supervised rehabilitation: 2-3 x per week as needed
DOCUMENTATION:	Precautions, pain level, medications, modalities Effusion Knee ROM & quadriceps function Gait

PHASE III: Generally 4-6 months post-op	
PHASE III GOALS:	Jog at own pace and distance without pain ≥ 90% quadriceps and hamstring strength compared to the uninvolved side ≥ 90% hop for distance compared to the uninvolved side
PRECAUTIONS:	*Continue to wear brace at all times (except while sleeping)* * NO open kinetic chain strengthening exercises* * NO running until 4 months post-op* * NO participation in contact/collision sports until ~8-9 months post-op*
BRACE:	Hinged sleeve knee brace
REHABILITATION:	*Continue phase II exercises as needed*
	Progress in duration and intensity of exercise only if there is no increase in knee pain or effusion since the previous exercise session
~13-16 weeks	Warm-up: 5-10 minutes (bike, elliptical, stairmaster) General LE stretching: 5-10 minutes (calf, HS, quads, HF, hip adductors) Progressive functional training (2 legged plyometrics, jump roping, etc.) Progressive strengthening (calf press, leg press, squats (0-60°), HS curls, hip abd/add (first set: 10 repetitions, then 2 additional sets at the same weight to muscle failure) Progressive balance training as needed
~17-26 weeks	Progressive jogging program: start with 5 minutes per session (increase time and/or distance no more than 10-20% per wk) Progressive functional training: Begin at 25-50% intensity and progress gradually (jumping, hopping, directional jogging, cariocas, shuffles, etc.)
FOLLOW-UP:	PT: Monthly; Ortho: ~6 months post-op; Supervised rehab: 1-2 x per week as needed
DOCUMENTATION:	Pain level & medications Effusion Knee ROM & quadriceps function Hop for distance Isokinetic testing at 6 months post-op
MISCELLANEOUS:	After 6 months post-op: Exercises in phase III are continued, gradually increasing intensity & duration as tolerated. The recommendation is to wait until 9-12 months post-op to return to contact/collision Sports. This time period may be adjusted slightly by the surgeon and therapist according to patient progress.