

Name: _____

Dr: Chris LaPrade, M.D.

Date: _____

● = Do exercise for that week

Week

ROM RESTRICTIONS
0-60° x 2 weeks then progress as tolerated

BRACE SETTINGS

Immobilizer x 6 weeks

Weight Bearing status

NWB x 6 wks

TIME LINES

Week 1(1-7POD)
Week 2(8-14POD)
Week 3(15-21POD)
Week 4(22-28POD)

| Initial Exercises | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 | 16 | 20 | 24 | | | | | |
|---|---|---|-----------|---|----------------|---|-----------------|-------------------------------|--------------------|----|-----------------------------|----|------|------|----|----|---------------|---------------|----|
| Ankle Pumps | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | |
| Patella/Tendon mobilization | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | |
| Extension heel prop | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | |
| Hamstring & calf stretching | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | |
| Seated knee flexion ROM | ≤60 PROM | | >60 AAROM | | | AROM progression (≈120° by 6 wks, Full ROM by 10 wks) | | | | | | | | | | | | | |
| Quad strength progressions | ISOs 0-60° SLR | | | | 90-60° arc PRE | | | Full arc PRE | | | | | | | | | | | |
| Hamstring strength progressions | No HS beyond AROM | | | | | | ISOs, hip-based | | | | Knee-based resisted arc PRE | | | | | | | | |
| Hip Strength (no valgus stress x 8 weeks) | Standing (band above knees) | | | | | | | Mat-based all directions, PRE | | | | | | | | | | | |
| Bridging | Knees extended - calves supported over ball | | | | | | | Standard bridge progressions | | | | | | | | | | | |
| Cardiovascular Exercises | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 | 16 | 20 | 24 | | | | | |
| Stationary Bike | NO | | | | | ROM | | | Gradually progress | | | | | | | | | | |
| Swim – flutter kick | WB Restricted | | | | | ● | ● | ● | ● | ● | | | | | | | | | |
| Elliptical, Walking | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| Stair stepper, Rower | | | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | | |
| *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 | WB Restricted | | | | | ● | ● | | | | | | | | | | | | |
| Calf raises | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| Marching into SLS | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| SLS balance progressions | | | | | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | | |
| 2 leg squat/Leg Press (2→1 leg) | | | | | | | | | | | NO | | ≤70° | | | | ↑ Load, depth | | |
| Shift & hold isometric over step | | | | | | | | | | | | ● | ● | ● | ● | | | | |
| Lunge & step-up/down progressions | | | | | | | | | | | | | | ≤70° | | | | ↑ Load, depth | |
| Agility Exercises | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 | 16 | 20 | 24 |
| Return to run guidelines | ≥16 wks post-op, YBT-Anterior ≤4 cm SSD, walk ≥1 mile no limp/no pain, Quad strength ≥75% LSI, ≥70% peak torque/BW | | | | | | | | | | | | | | | | | | |
| Initial – single plane agility/speed | | | | | | | | | | | | ● | ● | ● | | | | | |
| Advance – multi directional agility | | | | | | | | | | | | | ● | ● | | | | | |
| 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 | | | | | |
| Golf | | | | | | | | | | | | | | ● | | | | | |
| Outdoor biking, hiking, snowshoeing | | | | | | | | | | | | | | ● | | | | | |
| Sport Re-entry progressions | | | | | | | | | | | | | | ● | | | | | |

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

| | |
|------------------------|--|
| KEY PRECAUTIONS | No valgus stress x 12 weeks, No resisted hamstring curling through arc of motion x 4 months (meniscus), Limit squat depth to ≤70° x 4 months (meniscus), NO ER (cross-legged sitting) x 4 months (meniscus), Avoid aggressive twisting/pivoting x 6 months |
| ABBREVIATIONS | (ISO) isometric, (KF) knee flexion, (LAQ) long arc quad, (PRE) progressive resistance exercise, (SLR) straight leg raise, (TKE) band-resisted terminal knee extension |

POST-KNEE SURGERY RETURN TO ACTIVITY GUIDELINES/CRITERIA

| | |
|----------------------------|--|
| Return to run guidelines | ≥16 weeks post-op, YBT-Anterior ≤4 cm SSD, walk ≥1 mile no limp/no pain, Quad strength ≥75% LSI, ≥70% 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

(Will be performed at TCO/Training HAUS in Eagan, MN)

| 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 |
| <i>Max YBT(A) squat depth relative to LL</i> | ≥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 |
| <i>Hip ABD strength relative to BW</i> | ≥20% of BW | ≥25% of BW | ≥30% of BW |
| Quad strength LSI | ≥70% LSI | ≥80% LSI | ≥90% LSI |
| <i>Quad strength relative to BW</i> | ≥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 |
| <i>SLH distance relative to LL (norm comparison)</i> | | ≥80% of norms | ≥90% of norms |
| Triple hop test LSI | | ≥80% LSI | ≥90% LSI |
| <i>Triple hop distance (norm comparison)</i> | | ≥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