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ACL + MCL Reconstruction

High Yield Information / Timeline Summaries:

ROM: 0-90 degrees x 2 weeks -> no restrictions after 2 weeks

Weightbearing: Nonweightbearing x 6 weeks; May unlock brace for ambulation to allow slight knee flexion to help toe clear the ground.

Brace: Lock straight for sleep x 4 weeks; May transition to short hinged brace at 6 weeks – dependent on comfort and therapy progress. Need brace with side support x 3 months at minimum.

Precautions: No valgus force on knee; No tibial rotation x 4 months

Return to Sport Brace: ACL return to sport bracing is optional, but brace should be fitted around 5-6months post-operatively and utilized when patient begins sport-specific/agility drills around 6 months post-operatively.

Driving: R knee: 6 weeks – based on therapy progress
L knee: 1-2 weeks – when appropriate motion achieved and off of pain medication

Estimate of Return to Activities (subject to therapy progress)**:**

Kneeling: No kneeling prior to 3 months
Jogging: 5 months
Golfing: 6 months, progress each week - (chip/putt -> high irons -> low irons -> driving)
Outdoor Biking, Hiking, Running: 6 months
Agility/Sport-Specific Drills: 6-9 months
Full Cutting/Pivoting (contact): 9-12 months

Return to Sport Criteria:

1. ROM Full
2. No effusion
3. Single leg squat with good form
4. Dynamic neuromuscular control with multi-plane activities at high velocity without pain or swelling
5. Quadriceps strength ≥90% of contralateral side – Biodex if available
6. Vertical jump test, single leg hop tests (distance and timed test over 20ft) ≤ 5% deficit compared to contralateral lower extremity
7. DorsaVi Limb Symmetry >90% Limb Symmetry Index (LSI) on AMI and Acceleration/Deceleration Testing (If available)
8. Y-Balance ≥95% (mean of 3 trials in anterior, posterolateral, posteromedial)

Postop	Goals	Precautions	Exercises
GENERAL POST-OP COURSE PRECAUTIONS	Protect graft during recovery Obtain early ROM Emphasis on full passive extension	0-90° for 2 weeks, then advance as tolerated Hinged brace all times x 6wks Avoid rotational or valgus stress through knee	
Weeks 0-6 PT 2x/week HEP daily	Full passive knee extension Diminish pain and effusion Initiate early controlled motion (Goal: 0-90) Restore patellar mobility – superior patella glide with quad set Straight leg raise independently for transfers Ambulate safely with 2 crutches	NWB Brace locked at 0° for sleep ROM: 0-90° Avoid open chain terminal knee extension Do not lift extremity by heel Avoid rotational or valgus stress through knee No kneeling	1. Crutch/walker training 2. Patellar mobilizations inf/sup; med/lat 3. Wall slides/supine heel side; knee flexion seated 4.Isometric quad sets; NMES 5.Supine/Prone knee extension stretch 6. SLRs in brace, all planes **May progress with weight as needed 7. HS/Gastroc stretch 8. Supine/seated core stabilization 9. Supine/seated core isometrics 10. Ice, e-stim, elevation, ankle pumps for edema control, and vasopneumatic compression 11. BFR 2x weekly 12. Brace adjustment
Criteria to Progress	Pain free ROM 0-90+ Pain/swelling controlled SLR with no extensor lag		
Weeks 6-12 PT 2x/week HEP daily	Normal gait; no AD Maintain full knee extension AROM = contralateral side Perform ADLs without pain Eccentric leg press (4 sec) 1 x body weight ≤ 10° valgus collapse SL squat to 45°knee flexion with less than 10° of valgus collapse Ascend stairs unsupported with normal reciprocal gait	WBAT – transition with PWB first ROM: 0-135° No transverse plane exercises Avoid rotational or valgus stress through knee No kneeling No running No quick change of direction	1. Decrease use of crutches with gait training / wean fully as able 2. As quad control improves unlock brace for ambulation 3. May begin stationary bike (no resistance) 4. CKC ext: may begin exercises as outlined in weeks 2-3 in standard ACL protocol and advance as appropriate 5. Begin proprioceptive/balance exercises – may advance as outlined in standard ACL protocol 6. With squats, bridges: use band proximal to knee to minimize varus force on knee 7. Continue BFR 2x weekly 8. Resistance on bike – 9-10wks 9. Treadmill 7% incline – 9wks

Postop	Goals	Precautions	Exercises
Criteria to Progress	1.) Normal gait without assistive device 2.) Full ROM achieved 3.) Quad strength ≤ 20% deficit compared to uninvolved knee with isokinetic testing or 5 rep max testing		
Weeks 12-16 PT 2-3x/week HEP daily	Maintain full AROM MMT > 5/5 Q MMT > 5/5 HS SL squat to 45°-60°with ≤ 10° valgus collapse without raising heels Descend stairs unsupported with reciprocal gait	Avoid PFJ/patellar tendon pain ≤ 3/10 Avoid painful activities No jumping No cutting/pivoting	1. Progress CKC ex's: multidirectional lunges (sagittal, frontal, transverse), walking lunges, sidestepping 2. Advance multiplanar proprioceptive training 3. Initiate plyometrics if appropriate strength and balance 4. AROM knee ext 90°-0° (full) with light resistance 5. Can begin Fitter/slide-board 6. BFR as needed
Weeks 16-20 PT 1-2x/week HEP daily	**Criteria to begin jogging (16-20 weeks)** 1. Y-balance test < 4 cm deficit in any direction 2. SL squat ≥ 30° with less than 10° valgus collapse ≥ 15 reps 3. Perform ≥ 15 SL heel raises 4. Perform SL bridge ≥ 15 reps 5. Quad girth symmetry ≥ 80% 6. SL repeated forward hop ≥ 15 reps 7. SL repeated vertical hop ≥ 15 reps Initiate running with Alter G if available for 2-4 weeks before full body running	No cutting/pivoting No sports	1. Lateral sports cord drills 2. Test Y Balance 3. Begin T-Drill with shuffle only 4. Isokinetic strength training Q/HS bilateral comparison 90°-0° at 180°/s & 300°/s (alternative: knee extension 10 rep max) 5. If 12 week testing has been passed: Initiate light double leg plyometric program: 4- square, tuck jumps, and jump rope 6. Advance multiplanar proprioceptive agility drills that are sport specific: T drill, box drill, cone agility drills 7. Initiate deceleration training (TM Decline, Sports Cord)

Postop	Goals	Precautions	Exercises
Weeks 20-24 PT 1-2x/week HEP daily	Independent with jog/run program Increase sport specific endurance	No cutting/pivoting No sports	1. Progress plyometric program; multidirectional, progress DL hop 2. Initiate DL to SL hop, focus on landing mechanics 3. Progress isokinetic strength training 4. Progress sport specific training and agility 5. Progress to sprinting 6. Continue deceleration training with jogging
Weeks 24+ PT 1-2x/week HEP daily	Quad strength ≤ 10% deficit compared to uninvolved knee with isokinetic testing or 5 rep max testing (week 20) ≤10° knee valgus with DorsaVi Knee module (week 20) Pass Pro-Agility Shuttle Test within norms determined by PT (week 24) Unilateral hop tests ≤ 5% deficit compared to contralateral LE (week 24):	No live sports No sport drills with opponent	1. Test isokinetic strength 60°/s, 180°/s, & 300°/s (alternative test: 5 rep max knee extension) 2. Test DorsaVi Knee module if available 3. T-Drill Test (4. Pro Agility Shuttle Test 5. Functional hop tests: 6.Progress to single leg plyometric drills