**Brandon J. Barnes, M.D.** | Orthopaedic Surgeon, Sports Medicine Specialist www.osswf.com (239) 334-7000

## ACL Reconstruction with Quadriceps Tendon Autograft and Meniscal Repair (Inside-Out) Protocol

	Weight-baring	Brace	Range of Motion	Exercises
Phase 1	Heel touch with crutches (a)	<b>0-2 week:</b> Locked in full extension for ambulation and sleeping	Gentle Passive	Calf pumps, patellar mobilization, quadriceps tightening sets and SLR in brace. No weight-bearing motion.
0-2 weeks			0-90° by 2 weeks	
		Off for exercises and hygiene only		
Phase 2	2-4 weeks:	<b>2-6 weeks:</b> Unlocked 0-90°for ambulation, remove for sleeping (a).	Gain full and pain-free	Add side-lying hip and core, advance quad
2-12 weeks	50% weight bearing with			set and stretching( a)
	brace unlocked 0- 90°	Discontinue at 6 weeks if		In brace: Addition of heel raises, total gym (closed chain), gait normalization, eccentric quads, eccentric hamstrings.
	4-8 weeks:	quadriceps control is adequate (no extension lag)		
	Progress to full with brace unlocked 0- 90° and discontinue brace at 6 weeks.			Advance core work with hip, gluteal and core strengthening. No weight-bearing with flexion >90°
				Begin toe raises, closed chain quads, balance exercises, hamstring curls, stationary bike, step-ups, front and side planks, hip/glute/core
				Begin Stationary Bike at 8 weeks
Phase 3	Full with a normalized gait pattern	None	Full	Advance closed chain strengthening
12-16 weeks				Progress proprioception activities
				Elliptical at 12 weeks (low flexion angles)
				Running straight at 14-16 weeks when 8" step down is satisfactory

Phase 4	Full	None	Full	16 weeks: Begin jumping
16 weeks –				20 weeks: Advance running to sprinting,
6 months				backward running, cutting, pivoting, changing direction, initiate plyometric program and sport-specific drills
				22 weeks: Advance as tolerated
				FSA completed at 22 weeks (b)
Phase 5	Full	None	Full	Gradual return to sports participation after
6-12 months				completion of functional sports assessment (FSA)
				Maintenance program based on FSA

## SLR – Straight-leg raise

- (a) Modified with concomitantly performed meniscus repair/transplantation or articular cartilage procedure
- (b) Completion of FSA (Functional Sports Assessment) is not mandatory, but is recommended at approximately 22 weeks post-op for competitive athletes returning to play after rehabilitation