MPFL RECONSTRUCTION WITH HAMSTRING ALLOGRAFT AND TIBIAL TUBERCLE OSTEOTOMY (TTO) REHABILITATION PROTOCOL

	WEIGHT BEARING	BRACE	ROM	EXERCISES
PHASE I 0-2 weeks	Heel touch only	**0-2 weeks:** Locked in full extension at all times* Off for hygiene and exercises	0-90 as tolerated	Quad sets, SLR in brace, calf pumps, modalities, passive leg hangs to 90°
PHASE II 2-8 weeks	**2-6 weeks:** Heel touch only **6-8 weeks:** Advance 25% weekly until full	Unlocked during day 0-90, off at night Off for hygiene, rest, and exercises Discontinue after 6-8 weeks when WB comfortably	Advance as tolerated	PROM/AAROM to tolerance, patella and tibiofibular joint mobs Begin floor based core and glute/quad/hamstring exercises **6-8 weeks:** Addition of heel raises, closed chain lower body, gait normalization, eccentric quads/hamstrings; advance core, glutes and pelvic stability Begin stationary bike as tolerated after 6 weeks
PHASE III 8-12 weeks	Full	None	Full	Progress closed chain activities Begin hamstring work, lunges/leg press 0-90°, proprioception exercises, balance/core/hip/glutes
PHASE IV 12-16 weeks	Full	None	Full	Progress Phase III exercises and functional activities: walking lunges, planks, bridges, swiss ball, half-bosu exercises Advance core/glutes, balance, flexibility May advance to elliptical, pool as tolerated after 12 weeks
PHASE V >16 weeks	Full	None	Full	Slowly advance all activity as tolerated Progress to functional training, including running, jumping, pivoting, and sports activity after 16 weeks Return to play after 16 weeks as tolerated and when cleared by MD

*Brace may be removed at night after first post-operative visit (day 7-14) if directed

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