

**MENISCUS REPAIR (Bucket/Root Tear)  
 REHABILITATION PROTOCOL**

	<b>Weightbearing</b>	<b>Brace</b>	<b>Motion</b>	<b>Therapeutic Exercises</b>
<b>PHASE I</b> <b>0 to 4</b> <b>weeks</b>	Non-weightbearing (NWB), crutches	Locked in 0° (full extension) for sleeping and ambulation; unlocked while sitting	Passive range of motion (ROM), 0° to 90°	Passive knee range of motion 0° to 90° with brace unlocked. Patellar mobilizations. Hamstring and calf stretches. Strengthening exercises: quad sets, single leg raise hip flexion, hip abduction/adduction. <i>Avoid active knee flexion.</i>
<b>PHASE II</b> <b>Stage 1</b> <b>5 to 6</b> <b>weeks</b>	NWB, crutches	Locked in 0° (full extension) for sleeping and ambulation; unlocked while sitting	Passive ROM, 0° to 100° week 5, 0° to 110° week 6	Gently increase passive ROM—0° to 100° week 5, 0° to 110° week 6. Strengthening exercises: multi-angle quad isometrics, single leg raises in all 4 planes, knee extension from 90° to 0°. <i>Avoid twisting, deep squatting, and stooping. Avoid hamstring curls and open chain exercises.</i>
<b>PHASE II</b> <b>Stage 2</b> <b>7 to 8</b> <b>weeks</b>	WBAT	Unlocked for ambulation once full ROM (0° to 135°) and sufficient strength, locked at 0° for sleeping	Passive ROM, 0° to 120° week 7, 0° to 130° week 8	Continue increasing passive ROM—0° to 120° week 7, 0° to 130° week 8. Initiate closed kinetic chain (CKC) mini-squats (0° to 45°), CKC wall squats (0° to 60°), CKC weight shifts (diagonal). Begin balance training (cup walking) and proprioceptive training (tiltboard squats, biodex stability). Initiate hip abduction/adduction and flexion/extension strengthening on multi-hip machine. Begin stationary bike on (no resistance) when ROM appropriate. <i>Avoid twisting, pivoting, running, and deep squatting. Avoid hamstring curls and open chain exercises.</i>
<b>PHASE III</b> <b>9 to 16</b> <b>weeks</b>	Full	Discontinue once ambulating normally with brace unlocked	Maintain full, pain-free motion	<b>Week 9:</b> Continue stretching and ROM exercises to maintain full arc of motion 0° to 135°. Progress strengthening exercises: leg press 0° to 70°, knee extension 90° to 40°, hip abduction and adduction, wall squats 0° to 70°, vertical squats 0° to 60°, lateral step-ups, front step-downs. Balance/proprioceptive training: biodex stability, rocker board squats, cup walking. Stationary bike on low resistance. May begin pool program. <i>Avoid twisting, pivoting, running, and deep squatting.</i> <b>Week 11:</b> Continue and progress all strengthening exercises. Initiate light resisted hamstring curls. Initiate stair stepper. Toe calf raises. Progress balance training. Progress to isotonic strengthening program. <b>Week 13:</b> Progress to isotonic strengthening. Initiate pool running (forward and backward). Initiate stair-stepper. Progress balance training. Initiate front lunges. Begin walking program. <b>Week 16:</b> Continue strengthening and stretching. Progress walking program. Introduce cutting in pool.
<b>PHASE IV</b> <b>6 to 8</b> <b>months</b>	Full	None	Maintain full, pain-free motion	Continue/progress strengthening and isotonic. Bicycle, stair-stepper, and elliptical. Deeper squatting permitted at 5.5 months. Initiate straight-line running at 6 months. Begin pivoting and cutting drills and agility training at 7 months. Gradual return to sports at 7 to 8 months.