

# Cartilage Restoration: Patellofemoral

For more detailed MACI protocol please visit  
<https://www.raleighsportsmed.com/pdf/knee-maci-procedure-rehabilitation-protocol.pdf>

Postop	Goals	Precautions	Exercises
Weeks 0-2 HEP daily	Full passive extension Edema and pain control Promote independence	PWB (50%) Brace locked at 0° except for approved exercises and CMP  CPM (6hrs/day) Weeks 0-2: 0-30°	Quad sets/SLR Calf pumps Stretches: hamstring and gastroc
Weeks 2-6 PT 1-2x/week HEP daily	Full passive extension 90° knee flexion Prevent quad inhibition Edema and pain control Promote independence	WBAT Brace locked at 0° except for approved exercises and CMP (weeks 2-4) Unlock brace 0-20° (week 4)  CPM (6hrs/day) Weeks 2-4: 0-60° Weeks 4-6: 0-90°	A/AA ROM pain free Towel extension Patella mobilization (gentle) Quad re-education Multiple angle quad isometrics Short crank ergometry SLR in all planes Hip/Core resisted exercises LE flexibility exercises
Weeks 6-12 PT 2-3x/week HEP daily	Full ROM Normal gait pattern Ascend 8" step with control Normal patella mobility Improve ADL endurance	WBAT DC brace when adequate quad Avoid descending stairs reciprocally Avoid painful activities No running	Continue above exercises Leg press 0-60° Mini squats Retrograde treadmill Proprioception training Initiate step-up program
Weeks 12-20 PT 2-3x/week HEP daily	Return to normal ADLs Improve endurance Descend 8" step with control 85% limb symmetry Improve strength/flexibility	WBAT Avoid painful activities No running  Forward step down test at 4 months Isokinetic testing at 4 months	Continue and advance above Progress squat program Leg press (emphasize eccentrics) Initiate step down program Elliptical Retrograde treadmill
Weeks 20+ PT 1x/week HEP daily	No apprehension with sport specific movements Maximize strength and flexibility to meet sporting demands	WBAT Avoid painful activities No running until: Strength >70% contralateral No agility training until: Strength >90% contralateral No RTP until: Passes RTP evaluation MD clearance	Continue and advance above Begin forward running Begin plyometric program

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