Baylor Scott & White
ORTHOPEDIC ASSOCIATES OF DALLAS
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MACI Cartilage Implantation – Patella

REHABILITATION PROTOCOL

PHASE	RANGE OF MOTION	BRACE / WEIGHT BEARING	THERAPEUTIC EXERCISE
Phase I **0–6 weeks** GOAL TO ADVANCE *Flexion >120° by week 6; leg raise without lag*	Weeks 0-2: passive 0-40° only. Then increase gradually: 90° by week 4, >120° by week 6. CPM 6-8 hours/day if prescribed	Brace locked straight for walking and sleep. Weight bearing: 25% (week 0-1) → 50% (week 2) → 75% (weeks 3-4) → as tolerated (weeks 5-6). Unlock brace 0-30° for walking at weeks 4-6; discontinue at 6 weeks with no lag	Quad sets, straight-leg raises, kneecap mobilization; bike with high seat once 90° (week 4); pool walking at week 4 once incision healed
Phase II **6–12 weeks** GOAL TO ADVANCE *Full motion; normal gait; pain-free sit-to-stand*	Full. Avoid resisted knee straightening (leg extension machine) between 40° and 70°*	Full weight bearing by weeks 8-9	Strengthening only in the 0-40° arc: wall slides and squats to 40°, step-ups, bridges, heel raises; bike without resistance; single-leg balance at week 8
Phase III **3–6 months** GOAL TO ADVANCE *Squat to 40° with control*	Full	Full	Progress closed-chain strength within 0-40°; treadmill walking forward and backward; elliptical
Phase IV **6–9 months** GOAL TO ADVANCE *No pain or swelling with low-impact activity*	Full; strengthening now allowed to 40-70°	Full	Deeper squats and single-leg work, low-impact recreation
Phase V **9–18 months** GOAL TO ADVANCE *Strength and hop tests ≥90%*	Full without discomfort	—	Running at 9-12 months, then plyometrics and agility; return to sport at about 12 months**

NOTES

*The patella cartilage is loaded most when the knee straightens against resistance or squats between about 40° and 70°; this range is protected for 6 months

**If approved by physician

This protocol is a guideline. Your surgeon may adjust it based on your surgery and progress.
Call the office for fever, wound drainage, calf pain or swelling, or new numbness or tingling.

Questions: 469.800.7200
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