

PATELLOFEMORAL OSTEOCHONDRAL ALLOGRAFT

Post-Operative Physical Therapy Protocol



SCAN FOR THE
ONLINE VERSION



Stanford
MEDICINE

Dear Colleague,

I appreciate your partnership in the rehabilitation of this very special patient of ours. I have instructed the patient that you will be using this protocol. My belief is that the biggest predictor of success is what the patient does at home and consistently. **They should view you not just as a therapist but as a highly educated and skilled teacher** and the patient *must* be an active participant in the rehab process.

To facilitate this, I have included a copy of the rehab protocols I would like the patient to focus on at each time point in the rehab process. Please assist me by encouraging and teaching our mutual patient their home exercises as well.

With your help and the active participation of our patient, I know we can have another fantastic knee.

Please do not hesitate to reach out directly to me and my team with any questions at any time.

Respectfully,



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	WEEKS 0-2	WEEKS 2-4	WEEKS 4-6	WEEKS 6-12	MONTHS 3-6	MONTHS 6+
Weight bearing	Full <i>Brace locked</i>	Full <i>Brace locked</i>	Full <i>Brace unlocked</i>	Full	Full	Full
Range of motion	A/PROM 0-90° <i>Goal 90° by 2 wks</i>	A/PROM 0-90°	As tolerated <i>Goal 125° by 6 wks</i>	Full	Full	Full
Brace	Locked straight <i>Walk, sleep, rest</i>	Locked straight	Unlocked walking <i>D/C when able</i>	None	None	None
Strengthening	Quad sets, SLR <i>Leg hang to 90°, mobs</i>	Quad, HS, glute sets <i>Side-lying hip, core</i>	Continue	Closed chain <i>Wall sits, mini squats</i>	Open chain quads <i>Short arc; eccentric HS</i>	Sport-specific
Impact and sport	Optional CPM <i>Or upright bike</i>	Optional CPM <i>Or upright bike</i>	None	Stationary bike	Elliptical, bike, pool	Running from 6 mo <i>Sport ~9 months</i>

As tolerated means pain during exercise no more than 2/10 above baseline. Avoid pushing into pain.

WEEKS 0-2

- Full weight bearing allowed, but the brace must be locked in full extension.
- Brace locked in full extension when not performing the exercises below (sleeping, resting, etc.).
- A/PROM 0 to 90°; goal ROM 0 to 90° by 2 weeks.
- Passive leg hang to 90°, quad sets, patellar mobilizations, ankle pumps, straight leg raises.
- Optional CPM 4 hours per day, increasing 7 to 8° per day as tolerated, or an upright stationary bike with no resistance, pedaled by the non-operative leg (20 minutes of biking = 1 hour of CPM).

WEEKS 2-4

- Continue WBAT with the brace locked in full extension.
- A/PROM 0 to 90°.
- Patellar mobilizations; quad, hamstring, and gluteal sets.
- Side-lying hip and core exercises.

WEEKS 4-6

- A/PROM as tolerated; goal ROM 0 to 125° by 6 weeks.
- Begin ambulation with the brace unlocked; may discontinue when able.

WEEKS 6–12

- Begin closed chain exercises (wall sits, mini squats with no weight), stationary bike.
- Unilateral stance activities and balance training.

MONTHS 3–6

- Maximize core, gluteal, and pelvic stability work.
- Slowly incorporate open chain quad exercises (begin with short arc, then progress).
- Eccentric hamstring exercises.
- Advance to elliptical, bike, and pool activity as tolerated.

MONTHS 6+

- Return to sport-specific activities.
- **Run progression and jogging can begin at this point (around 6 months).**
- **Return to sport around 9 months**, once strength and hop testing are at 90% or better and Dr. Tummala clears the patient.

CRITERIA TO RETURN TO SPORT

- Full ROM compared with the uninvolved side.
- No effusion.
- Normal gait and pain-free activities of daily living.
- Quadriceps strength at least 90% of the uninvolved side.
- Single-leg hop tests at least 90% of the uninvolved side.
- Around 9 months after surgery.

WEEK-BY-WEEK PROGRESSION

EXERCISE	1	2	3	4 (1 mo)	5	6	7	8 (2 mo)	9	10	12 (3 mo)	16	20	24 (6 mo)
Initial Exercises														
WBAT, brace locked straight (walk, sleep, rest)														
Brace unlocked for walking; D/C when able														
A/PROM 0-90°, goal 90° by 2 weeks														
A/PROM as tolerated, goal 125° by 6 weeks														
Leg hang, quad sets, mobs, ankle pumps, SLR														
Quad, HS, glute sets; side-lying hip and core														
Optional CPM or no-resistance upright bike (early)														
Advanced Exercises														
Closed chain: wall sits, mini squats (no weight)														
Unilateral stance, balance														
Open chain quads (short arc first)														
Eccentric hamstrings; core and pelvic stability														
Cardiovascular Exercises														
Stationary bike														
Elliptical, pool														
High-Level Activities														
Running from 6 months; sport around 9 months														

This protocol is a general guideline and does not replace the clinical judgment of the treating therapist and surgeon. Please contact our office with any questions.