



THE STONE CLINIC

ORTHOPAEDIC SURGERY, SPORTS MEDICINE AND REHABILITATION

ARTICULAR CARTILAGE TRANSPLANT TO THE TROCHLEA

Post- Operative Physical Therapy Protocol

General Considerations:

- Weight bearing as tolerated in full extension with brace for 4 weeks post-operatively.
- Patients are cleared to drive once they are off all narcotic pain medications typically around week 2, or if cleared by Physical Therapist. Can unlock brace while in car.
- Regular manual treatment should be conducted to decrease the incidence of fibrosis.
- Regular stretching of the posterior musculature is important to prevent a flexion contracture. Although ambulating in full extension, some loss of motion prior to surgery is not uncommon.
- Imperative to work on recruiting VMO throughout the rehab process.
- No resisted leg extension machines (isotonic or isokinetic) at any point.
- No patella mobs for 4 weeks.
- Low impact activities for 3 months post-operatively.
- Use of the CPM (Continuous passive machine) for 6 hours a day for 4 weeks. Range of motion is 0-100 degrees for the first 4 weeks. Gradually work up to 100 degrees as patient tolerates.
- Avoid direct palpation of the surgical portals for 4 weeks. Consider the edges of the bandages as the “do not touch” zone (approximately 2” in all directions from each portal).

Week 1:

- Nurse visit day 2 post-op to change dressing and review home program.
- Icing and elevation regularly per icing protocol.
- Continuous passive machine (CPM) at home for 6 hours daily during wake hours.

Manual: -Soft tissue mobilization (STM) to quadriceps, posterior musculature, suprapatellar pouch, popliteal fossa, ITB (iliotibial band), Hoffa’s fat pads.
-No patellar mobs x 4 weeks.
-No direct palpation of surgical portals x 4 weeks.

Exercise: -Well-leg stationary cycling, upper body ergometer (UBE).
-Straight leg raises (standing, supine, side lying), quadriceps/ gluteal sets, hip and ankle exercises.
-Seated dangle with opposite leg support within appropriate range of motion.

Goals:

Passive range of motion 0 to 70 degrees.
Gait weight bearing as tolerated in full extension brace x4 weeks post op.

Weeks 2 - 4:

- Nurse visit at 14 days for suture removal and check-up.

Manual: -Continue with soft tissue mobilization to quad, posterior musculature, suprapatellar pouch, popliteal fossa, ITB, Hoffa’s fat pads.
-No patellar mobs x4 weeks.
-No direct palpation of surgical portals x4 weeks.

Exercise: -Proprioception exercises.



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<p>-Non weightbearing aerobic exercises (i.e. unilateral cycling, UBE, single leg row machine). -Manual resisted proprioceptive neuromuscular facilitation patterns of the foot, ankle and hip.</p>
<p>Goals: Passive range of motion 0 to 100 degrees. Gait weight bearing as tolerated in full extension brace x4 weeks.</p>
<p><u>Weeks 4 - 6:</u> -M.D. visit at 4 weeks post-operative, wean off use of rehab brace.</p> <p>Manual: -Continue with soft tissue mobilization to quadriceps, posterior musculature, suprapatellar pouch, popliteal fossa, ITB , Hoffa's fat pads. -Can initiate gentle patellar mobilizations and scar mobilization if incisions closed > 4 weeks post op.</p> <p>Exercise -Incorporate functional exercises (i.e. short arc squats, slider lunges, shuttle squats/Pilates board squats and exercises, calf raises). Balance/proprioception exercises. -Progress into bilateral stationary cycling and continue to add light resistance as tolerated. -Slow to rapid walking on treadmill (preferably a low-impact treadmill). -Pool/deep water workouts once surgical portals are completely closed.</p>
<p>Goals: Knee flexion 110 degrees. Gait: full weight bearing, unlock brace/wean off brace, focus good mechanics with minimal assistive device.</p>
<p><u>Weeks 6 - 8:</u> Manual: -Continue with soft tissue mobilization and scar tissue mobilization as needed.</p> <p>Exercise: -Bilateral stationary cycling and progress to road cycling on flat roads. -Initiate pool/deep water exercises. -Gradually increase the range of motion of closed- and open-chain exercises. -Add lateral training exercises (i.e. side-stepping, Theraband resisted sidesteps) once adequate strength has been demonstrated.</p>
<p>Goals: -Patients should be walking without a limp. Range of motion 0 to 120 degrees. -Ascend stair step at 8 inch height.</p>
<p><u>Weeks 8 - 12:</u> Manual: -Continue with soft tissue mobilization and scar tissue mobilization as needed</p> <p>Exercise: -Increase the intensity of functional exercises (i.e. add stretch cord for resistance, increase weight with weight lifting machines for upper body, avoid loading with knee flexion type activities- weighted squats). -Road cycling as tolerated, remain in saddle, slow cadence, no clip in type shoes until > 12 weeks.</p>



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Goals:

- Full range of motion symmetrical to opposite lower extremity.
- Descend stair step at 8 inch height, descend hills with good control.

Weeks 12+:

- Sports Test 1 at 12 weeks
- Continue with strengthening, endurance, balance, and sport specific training.
- Increase intensity of low impact type cardio- swimming, cycling, elliptical, etc.
- No high impact activities until 1 year unless approved by MD.

6 months +

Appointment with MD. Will receive further instructions at this time.