

**Jared T. Lee, MD**

Hip, Knee, Shoulder &amp; Sports Medicine Surgery

The Steadman Clinic – Aspen

401 Castle Creek Rd, Suite 2100, Aspen, CO 81611

Practice Manager: Elizabeth Fioretti, M.Ed., LAT, ATC

(970) 456-2798

**TROCHLEA OSTEOCHONDRAL ALLOGRAFT TRANSPLANTATION (OATS) PROCEDURE REHABILITATION PROTOCOL**

Phase	Restrictions	Therapeutic Exercises
Phase 1: Weeks 0-6  Goals: Reduce swelling and edema, minimize pain, retard muscle atrophy, protect the surgical repair, range of motion restoration	-Patient may only bear weight with the brace locked 0-30 degrees x6 weeks -Patient permitted to use crutches as needed -Range of motion 0-90 degrees -No superior-inferior or medial-lateral patellar mobilizations -Begin isometric quadriceps strengthening immediately	-PROM, AROM, AAROM out of the brace 0-90 degrees x6 weeks -Patient must achieve full knee extension by 14 days s/p -Pain management -Patellar mobilizations lateral-medial ONLY -Quad sets, straight leg raises -Hip ab/adduction strengthening -Hamstring and calf stretching -Ankle pumps, full ankle range of motion - Modalities PRN
Phase 2: Weeks 6-12  Goals: Full range of motion, minimal pain, increase resistance exercises, restore normal gait pattern, protect graft fixation	-Patient may begin weight-bearing with the brace completed unlocked -Weight bearing as tolerated, crutch wean if needed -Begin increasing range of motion -No aggressive strengthening until 12 weeks	-Increase range of motion by 10-15 degrees per week until full motion is achieved (At least 0-120) -Soft tissue mobilization -Patellar mobilizations in all planes -Continue with previous exercise programs -Begin non-resistance biking -Gentle body weight exercises -Gluteal strengthening: clams, reverse clams, side lying hip abduction, prone hip extension -Aquatic therapy with emphasis on gait normalization -Modalities PRN
Phase 3: Weeks 12-16  Goals: Proper gait mechanics, improve lower extremity strength, full range of motion, neuromuscular control	-Patient may begin to wean from the brace -Unrestricted weight bearing -Unrestricted range of motion -Increase strengthening progression	-Progress strengthening program -Begin closed chain strengthening: toe raises, mini squats, PNF with resistance -Progressive resistance exercises (1-5lbs) -Balance exercises -Hamstring curls -Stationary biking with increasing resistance as tolerated

<p>Phase 5: Months 4-6</p> <p>Goals: Full pain-free range of motion, no evidence of patellofemoral joint irritation, strength and proprioception restoration, power progression</p>	<p>-Strengthening progression -No range of motion or weight bearing restrictions -Glute med and max isometric strength to reach &gt;80% of the contralateral limb</p> <p><b>Criteria for progression:</b> -No valgus collapse -No femoral adduction/IR rotation pelvic drop or excessive trunk lean when performing single leg endurance tasks</p>	<p>-Continue and progress previous flexibility and strengthening activities -Functional walk/jog/run progression -Forward and backward running progression (½, ¾, full speed) -Progress lower extremity strengthening: squats, single leg (elevated split squat, TRX) -Progress dynamic balance -Increase aerobic conditioning (elliptical, swimming, biking)</p>
<p>Phase 6: Months 6+</p> <p>Goals: Completion of appropriate functional progression, strength maintenance, patient education</p>	<p>-N/A</p> <p><b>Criteria for discharge:</b> -Surgeon clearance -Hamstring strength index &gt;90% as compared to contralateral limb -Quadriceps strength index &gt;90% compared to contralateral limb -Y-Balance anterior reach &lt; 4cm -No complaints of pain or instability</p>	<p>-Functional progression including but not limited to:</p> <ul style="list-style-type: none"> <li>• Cutting, crossover, carioca, etc.</li> <li>• Plyometric exercises as appropriate to patient goals: med ball work, sled drills</li> <li>• Agility drills: shuffles, ladder footwork, cone drills, z-cuts, w-cuts, multi-planar sport specific drills</li> </ul>