

**TIBIAL TUBERCLE OSTEOTOMY (ANTEROMEDIALIZATION) +/- MPFL
RECONSTRUCTION PT PROTOCOL**

	BRACE INSTRUCTIONS AND RESTRICTIONS	RANGE OF MOTION GOALS	PT EXERCISES/NOTES
PHASE 1 First 2 Weeks (0-2) 1-2 Sessions/week Begin after 5-7 days	-Hinge Knee brace x 6 weeks (may remove for shower/hygiene) -Brace locked in extension with ambulation and sleeping at 0 degrees -Unlock brace when seated for 0 to 90 degrees range of motion -Crutches for assisted ambulation -Touch down weight bearing	-Begin PROM/AAROM/AROM when seated 0 to 90 degrees	-Begin patellar mobilization, pain/edema control, passive/active ROM exercises -Strengthening to include ankle pumps, quad sets, straight leg raise in brace -Consider NMES as needed
PHASE 2 Next 4 Weeks (2-6) 2 Sessions/week	-Hinge Knee brace x 6 weeks (may remove for shower/hygiene) -Brace locked in extension with ambulation and sleeping at 0 degrees -Unlock brace when seated for 0 to 90 degrees range of motion -Crutches for assisted ambulation -Touch down weight bearing	-Continue to advance PROM/AAROM/AROM to reach full ROM (Goal of 120 degrees knee flexion by 6 weeks)	-Continue phase 1 exercises and add knee extension stretches, heel raises in brace -Side lying hip/core strengthening -Consider NMES and add Blood Flow Restriction as needed

<p>PHASE 3 Next 4 Weeks (6-10) 2 Sessions/week</p>	<ul style="list-style-type: none"> -Advance to full weight bearing as tolerated -Unlock brace with ambulation at 7 weeks -Discontinue crutches as able at 7 to 8 weeks -Discontinue brace at 8 weeks 	<ul style="list-style-type: none"> -Continue to advance PROM/AAROM/AROM to reach full ROM 	<ul style="list-style-type: none"> -Continue phase 2 exercises and add closed chain exercises, hamstring work, proprioception exercises, balance/core/hip/glutes -Avoid loading knee greater than 90 degrees of flexion -Daily stretching including prone quadriceps, hamstrings, and calf -Stationary bike to increase ROM at 8 weeks
<p>PHASE 4 Next 6 Weeks (10-16) 1-2 Sessions/week</p>	<ul style="list-style-type: none"> -Continue patellar stabilizing brace 	<ul style="list-style-type: none"> -Continue to advance PROM/AAROM/AROM to reach full ROM 	<ul style="list-style-type: none"> -Continue phase 3 exercises and add lunges, seated leg press 0 to 90 degrees, squat to chair, step-up/step-down -Avoid loading knee greater than 90 until 12 weeks -Progress proprioceptive activities -Stationary bike add resistance as tolerated -Running progression at 12 weeks -Advanced to single leg wall slides, single leg squat to chair at 14 weeks -Consider ACE STRENGTH after 4 months

<p>PHASE 5 16 Weeks+ Sessions weekly frequency to be determined</p>	<p>-Discontinue patellar stabilizing brace as able</p>		<p>-Continue phase 4 exercises -May begin plyometric exercises at 16 weeks (low intensity vertical and lateral hopping to begin – initially both feet, progress to one foot; advance volume as tolerated) -Begin use of conventional exercise equipment (start with light weight and high rep/sets, progress to short reps/sets and high weight) -Advance sprinting, backward running, zig-zag running, figure-of-eight running, carioca running, shuttle run and sport specific drills provided 70% strength on Limb Symmetry Index at 5 months - Consider ACE SPORT after 5+ months -Return to sport after 5 to 6 months per protocol and once clear by MD</p>
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FUNCTIONAL TEST/RETURN TO SPORT CLEARANCE CRITERIA:

- > 90% isometric quadricep strength
- > 90% comparable hop testing to contralateral side (single-leg, triple, cross-over, 6 meter timed hop test)
- > 90% quad index LSI with Biodex or HHD
- > 90% quad peak torque/weight on Biodex (if applicable)
- Good form on vertical jump, deceleration shuttle test, Y-balance test
- No functional complaints, effusion, ROM restriction
- Good confidence with sport specific agility drills, running, and jumping
- Acceptable ACL-RSI score

This protocol is intended for the purposes of guiding post-surgical or post-injury rehabilitation exercises and goals. These guidelines may be interpreted by a certified physical or occupation therapist and tailored to meet patient specific goals and expectations. Other specific modifications may be made by Dr. Butterfield depending on adjuvant surgical procedures, surgical findings, or rehabilitation progress.

Please fax initial physical therapy assessment and progress notes to Dr. Butterfield at 763-786-3320. You may direct questions regarding this protocol or patient progress to our office at 763-786-9543 or email at MatthewButterfield@tcomn.com