

POST-OPERATIVE REHABILITATION PROTOCOL

Tibial Tubercle Osteotomy with MPFL Reconstruction

William McLaughlin, MD | Sports Medicine Surgery | Advanced Bone & Joint

Phase 1 | 0-6 Weeks

GOALS FOR THIS PHASE

- Strict NWB with crutches.
- Brace locked at 0° for ambulation; remove for ROM/hygiene.
- Brace on for sleeping during first 2 weeks.
- Achieve ROM 0-90° with emphasis on full extension.
- Initiate quadriceps activation, SLR, and patellar mobility (week 2).

Weight Bearing & Bracing

- Strict NWB with crutches.
- Brace locked at 0° for ambulation.
- May remove brace for ROM/hygiene.
- Brace to remain on for sleeping during first 2 weeks.

Range of Motion

- ROM: 0-90° (passive / active-assist) with emphasis on full extension.

Therapeutic Exercises

- SLR supine with brace locked at 0°.
- Quad sets.
- Ankle pumps.
- At 2 weeks: begin floor-based core, hip, and glutes work and patellar mobilization.

Phase 2 | 6-12 Weeks

GOALS FOR THIS PHASE

- Advance to PWB (25% → 50% over weeks 6-8); WBAT after week 8.
- Begin stationary bike.
- Unlock brace and discontinue crutches when quad function adequate.
- Wean from brace after 6 weeks as tolerated.
- Achieve full active/passive ROM; advance light open-chain and closed-chain strengthening.
- Begin hamstring strengthening at week 10.

Weight Bearing & Bracing

- Advance to PWB (25%, then 50% over weeks 6-8).
- May advance to WBAT after week 8.
- Unlock brace; discontinue crutches when quad function is adequate.
- May wean from brace after 6 weeks as tolerated.

Range of Motion

- Full, unlimited active/passive ROM, advance as tolerated.

Therapeutic Exercises

- Begin stationary bike.
- Continue SLR, quad sets.
- Advance to light open-chain exercises, mini squats.
- Begin hamstring strengthening at week 10.

Phase 3 | 12-16 Weeks

GOALS FOR THIS PHASE

- Full gait with normalized pattern.
- Full ROM.
- Begin elliptical, swimming, and outdoor cycling.
- Progress to balance and proprioception exercises.

Gait

- Full gait with normalized pattern.

Range of Motion

- Full ROM.

Therapeutic Exercises

- Begin elliptical, swimming, and outdoor cycling.

- Progress to balance/proprioception exercises.

Phase 4 | 16+ Weeks

GOALS FOR THIS PHASE

- Advance closed-chain exercises.
- Maximize single-leg dynamic and static balance.
- Develop gluteal/pelvic stability, core, and closed-chain quadriceps program.
- Focus on single-leg strength.
- Begin light plyometric program emphasizing single-leg loading.

Therapeutic Exercises

- Advance closed-chain exercises.
- Maximize single-leg dynamic and static balance.
- Gluteal/pelvic stability/core + closed-chain quad program; HEP independent.
- Focus on single-leg strength.
- Begin light plyometric program.
- Emphasize single-leg loading.

This protocol is a general guideline. Progression is patient-specific and at the discretion of William McLaughlin, MD.