

High Tibial Osteotomy (HTO) Rehabilitation Protocol

| | Weight-bearing | Brace | Range of Motion | Exercises |
|------------------------------|--|--|--|--|
| Phase 1 0-2 weeks | Heel touch only | Locked in full extension at all times Off for hygiene and home exercise only | Gentle passive 0-90° | Calf pumps, patellar mobilization, quadriceps tightening sets and SLR in brace |
| Phase 2 2-6 weeks | Heel touch only | 2-8 weeks: Unlocked 0-90° and worn daytime only until 6 weeks Off at night for sleeping Discontinue brace at 6 weeks | Maintain full extension and progress to full flexion | Progress non-weight-bearing flexibility, modalities as needed Add side-lying hip and core, advance quad set and stretching Advance core work with hip, gluteal and core strengthening |
| Phase 3 6-8 weeks | Advance 25% weekly and progress to full with normalized gait pattern | None | Full | Progress closed chain activities. Advance hamstring exercises, proprioception & balance exercises, lunges & leg press Advance core work with hip, gluteal and core strengthening Begin Stationary Bike at 6 weeks |
| Phase 4 8-16 weeks | Full | None | Full | Progress Phase III exercises and functional activities: walking lunges, planks, bridges, Swiss ball, half-Bosu exercises Advance core work with hip, gluteal and core strengthening Add elliptical at 12 weeks and swimming permitted at 12 weeks. |
| Phase 5 4-6 months | Full | None | Full | Advance Phase 4 activities. Progress to functional training, including impact activity after 5 months when cleared by MD |

CPM – continuous passive motion machine; SLR – Straight-leg raise;