

High Tibial Osteotomy (HTO) Rehab Protocol

Description of Procedure: The tibia is cut just proximal to the tibial tuberosity beginning medial and stopping 1 centimeter short of the lateral cortex. The cut is opened allowing the tibia to be placed in the desired degree of alignment. This opening is fixed in position with a plate and screws. The opening is bone grafted.

Safety Warning: Until the osteotomy has healed, there is risk of fracture. Radiographs at six weeks will dictate weight bearing status.

	Weight Bearing	Brace	ROM	Therapeutic Exercise
Phase I: 0 to 6 Weeks	<p>0 to 4 Weeks: Foot flat, minimal weight bearing in crutches</p> <p>4 to 6 Weeks: Gradual increase to full weight bearing</p>	Brace is worn when patient is ambulating until independent straight leg raise can be performed without extension lag and controlled abduction/ adduction accomplished	Achieve full range of motion as soon as tolerated	<p>Prone hangs, heel props, quad sets, SLR, hamstring isometrics - complete exercises in brace if quad control is inadequate; core proximal program; normalize gait; FES biofeedback as needed</p> <p><i>** Incorporate use of stationary bike (high seat, low resistance) and patellar mobilization exercises after surgical dressing is removed</i></p>
Phase II: 6 Weeks to 3 Months	Full weight bearing normalized gait pattern; no limping	Discontinue use-per physician	Full active range of motion	<p>Begin Closed Chain Activities: Mini-squats 0 to 45° - progressing to step-ups, leg press 0 to 60°, closed chain terminal knee extensions, toe raises, balance activities, hamstring curls, increase to moderate resistance on bike</p>
Phase III: 3 to 9 Months	Normal gait	None	Full and pain-free	Advance bilateral and unilateral closed chain exercises with emphasis on concentric/eccentric control, continue with biking, elliptical, and walking on treadmill, progress balance activities

- No closed chain exercises until six weeks post-op.
- CPM used if concomitant cartilage restoration performed at the time of osteotomy.
- Progression back to sport is dependent on case per case basis and determined by Dr. Farr. If pain or swelling occurs patient is expected to stop causative activity and follow-up with our office.
- Leg extension exercises with resistance are not allowed indefinitely.