

## 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.

	<b>Weight Bearing</b>	<b>Brace</b>	<b>ROM</b>	<b>Therapeutic Exercise</b>
<b>Phase I: 0 to 6 Weeks</b>	<p><b>0 to 4 Weeks:</b> Foot flat, minimal weight bearing in crutches</p> <p><b>4 to 6 Weeks:</b> 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>
<b>Phase II: 6 Weeks to 3 Months</b>	Full weight bearing normalized gait pattern; no limping	Discontinue use-per physician	Full active range of motion	<p><b>Begin Closed Chain Activities:</b> 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>
<b>Phase III: 3 to 9 Months</b>	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. Roberson.  
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.