

PT PROTOCOL

High Tibial Osteotomy (HTO)

Rehabilitation Protocol

Weight-Bearing Status

ONLY IF DIFFERENT FROM PROTOCOL BELOW

Weight-bearing status depends on the specific procedure performed, intraoperative findings, and radiographic healing. Follow the weight-bearing status in the phases below unless a different status is indicated here.

☐ Non-weight-bearing ☐ Toe-touch / partial weight-bearing ☐ Weight-bearing as tolerated

Brace / precautions: _____

1

Weeks 0–6

Protect osteotomy; NWB progressing to partial WB, locked brace

2

8 Weeks

WB advancing per surgeon/radiographs; brace unlocked, then discontinued

3

4 Months

Full WB & ROM; begin running

4

4–5 Months

Begin sport/job-specific training

5

7–9 Months

Return to sport

Milestones above are goals, not guarantees; progression is criterion-based.

Phase 1

Weeks 0–6

Weight-Bearing: Non-weight-bearing, brace locked in extension (weeks 0–2). Toe-touch weight-bearing progressing to partial weight-bearing, brace locked in extension (weeks 4–6).

Range of Motion: AAROM/PROM — passive extension only. 0–90° (weeks 0–4). 0–120° (weeks 4–6).

Therapeutic Exercises

- Quad sets, gluteal sets, ankle pumps.
- Side-lying hip abduction/adduction with brace, until elimination of quad lag.
- Straight leg raise with brace locked in extension.
- Clamshell; hamstring/ITB/gastroc stretch.
- Stationary bike with no resistance.

Phase 2

Weeks 6–12

Weight-Bearing: As tolerated at 8 weeks, per surgeon/radiographs.

Brace: Unlocked for ambulation until good quad control; discontinue at 8 weeks.

Range of Motion: PROM/AAROM/AROM as tolerated.

Therapeutic Exercises

- Stretching: hamstring, gastroc/soleus, prone quad with strap.
- Strengthening: TKE 0–40°, leg press, partial-range wall squats 0–45°, forward/lateral step-ups.
- Week 8: Romanian deadlifts, band walks, stool walks.
- Week 9: BOSU partial squat 0–60°.
- Week 10: prone hamstring curl, beginning with ankle weights and progressing to weight machine.
- Modalities per PT discretion.

Phase 3**Weeks 12–16**

Goal: Full, symmetrical, pain-free range of motion; quad strength $\geq 80\%$ of the uninvolved leg.

Therapeutic Exercises

- Total-leg and single-leg strengthening.
- Hamstring and quadriceps isotonic exercises through full range of motion.
- Progressive proprioception: single-leg balance, stable to unstable surfaces, perturbations.
- Continue stationary bike, elliptical, and treadmill walking.

Phase 4**3+ Months**

Weight-Bearing: Full.

Range of Motion: Full and painless.

Therapeutic Exercises

- 4 months: begin running.
- 4–5 months: start sport/job-specific training.
- 7–9 months: return to sport.