

REHABILITATION GUIDELINES AFTER HIGH TIBIAL OSTEOTOMY



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The intent of this protocol is to provide the therapist with guidelines of the post-operative rehabilitation course after a high tibial osteotomy. It should not be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their physical exam findings, individual progress, and/or the presence of post-operative complications. The therapist should consult the referring physician with any questions or concerns.

FREQUENCY: Weeks 0-4: 3x/week. Weeks 4-16: 2x/week. Weeks 12-24: 1x/week.

INDIVIDUAL CONSIDERATIONS:

PHASE I (0-6 weeks)

Goals

- Control inflammation and pain
- Protect soft tissue and osteotomy fixation

- CPM to 90 degrees
- Full active extension and 90 degrees of flexion
- Achieve quadriceps control

Brace

- May use for ambulation for comfort but is not necessary
- Discontinue for sleep
- May remove for CPM and exercises except straight leg raises

Weight-Bearing Status

- NWB for 6 weeks

Therapeutic Exercises

- Straight leg raises in all planes (use brace locked in extension for SLRs)
- Heel slides to 90 degrees, calf pumps, quadriceps sets
- Electrical stimulation and biofeedback to regain quad function
- Patellar mobilization
- Ankle ROM and resistive exercises with sports tubing (Theraband)
- Calf and hamstring stretches

PHASE II (6-8 weeks)

Criteria

- Good quad set, straight leg raise without extension lag
- 90 degrees of knee flexion
- Full extension

Goals

- Increase ROM
- Increase quad strength

Brace/Weight-Bearing Status

- Begin 50% WB at 6 weeks with crutches
- Initiate FWB at 8 weeks
- Discard crutches when patient has good quad control

Therapeutic Exercises

- Increase ROM (no limit)
- Progress to SLRs without brace when quad strength can prevent an extension lag
- Stationary Bike (high seat, low tension)
- Pool walking to establish a normal gait
- Begin proprioception training (mini-tramp standing, standing ball throwing and catching)

PHASE III (8-12 weeks)

Criteria

- Normal gait
- Full extension and flexion to 100 degrees
- Sufficient strength and proprioception to initiate functional activities

Goals

- Improve confidence in the knee
- Progress with strength, power, and proprioception

Brace/Weight-Bearing Status

- Discontinue brace and crutches when normal gait is achieved
- Continue with FWB

Therapeutic Exercise

- Continue with flexibility exercises
- Mini-squats and leg press to 60 degrees
- StairMaster, elliptical trainer, cross-country ski machine, lap swimming
- Stationary bike, increase resistance
- Step-up, start 2 inches and increase to 8 inches
- Continue to work on proprioception and balance (lateral slide board, ball throwing and catching on unstable surface)
- Treadmill walking

PHASE IV (12-24)

Criteria

- Sufficient strength and proprioception to progress to recreational activities
- Normal gait

Goals

- Return to unrestricted activity by 6 months

Therapeutic Exercises

- Progress with flexibility and strengthening program
- Advance with closed chain exercises
- Begin pool jogging and progress to jogging on land
- Begin to incorporate cutting drills into agility training
- Advance heights with plyometric conditioning
- Sports specific drills (start a 25% on speed and advance as tolerated)

Criteria for Return to Sports

- Normal gait
- No effusion
- Quad and hamstring strength 90% of contralateral side
- No patellofemoral symptoms