



# SCHOOL OF MEDICINE

DEPARTMENT OF  
ORTHOPAEDICS & REHABILITATION

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## **Post-operative Rehabilitation Protocol**

**MPFL reconstruction**

**\_\_Tibial Tubercle Osteotomy (TTO)**

### **Phase I – Acute Phase: 0-2 Weeks**

Goals:

- Diminish pain, edema
- If post-op brace applied for TTO it should be locked in extension
- Reestablish quadriceps muscle activity/re-education (goal of no quad lag during SLR)
- May perform quad work out of brace (if present no brace necessary if no TTO)
- Educate the patient regarding weight bearing as tolerated, use of crutches, icing, elevation and the rehabilitation process

Weight bearing:

- Weight bearing as tolerated. Discontinue crutch use as swelling and quadriceps recruitment dictates

Modalities:

- Cryotherapy for 15 min 4 times a day
- Electrical stimulation to quadriceps for functional retraining as appropriate
- Electrical stimulation for edema control- high volt galvanic or interferential stimulation as needed

Therapeutic Exercise:

- Quadriceps sets
- SLR
- Hip adduction, abduction and extension
- Ankle pumps
- Gluteal sets
- Heel slides
- Hamstring and gastroc/soleus and quadriceps stretches

### **Phase II: 2-6 weeks**

Goals:

- Restore and improve muscular strength and endurance
- FULL ROM
- Open brace to 0-90 degrees (if TTO)
- Work toward normal gait
- Improve balance and proprioception

Weight bearing status:

- Patients may progress to full weight bearing as tolerated. Patients may require one crutch or cane to normalize gait before ambulating without assistive device.

Therapeutic exercise:

- Continue all exercises as needed from phase one
- Lateral step ups, step downs, and front step ups
- Closed kinetic chain exercise terminal knee extension
- Four way hip exercise in standing
- Proprioceptive and balance training
- Stretching exercises- as above, may need to add ITB and/or hip flexor stretches

### **Phase III – 6-12 weeks**

Goals:

- Discontinue brace if present for TTO
- Enhance muscular strength and endurance
- Full ROM
- Improve quad control and strength

Therapeutic Exercise:

- Continue to emphasize closed-kinetic chain exercises
- Advance quad and hamstring strengthening
- Core control and kinetic chain exercises

### **Phase IV – 3-6 months**

Goals:

- Enhance muscular strength and endurance
- Core control
- Advance to full activity

Therapeutic Exercise:

- Continue to emphasize closed-kinetic chain exercises
- Begin running and sports specific drills
- Advance to agility drills
- Continue Core control and kinetic chain exercises