

## **Rehabilitation Protocol: Tibial Tubercle Transfer**

### **Phase I (Weeks 0-2)**

#### **Bracing:**

- Hinged knee brace locked in extension for a total of 6 weeks (including during sleeping).
- Remove for rehab with PT

#### **Weight bearing:**

- Non-weight bearing x 6 weeks

#### **Range of Motion:**

- Start Passive ROM up to 30 degrees of flexion
- Continuous passive motion 0-30
- Approximate goals of 45 degrees of flexion by day 5
- 60 degrees by week 1
- 75 degrees by week 4
- 90 degrees by week 5-6
- 115-125 degrees by week 8
- 125-135 degrees by week 10-12

#### **Therapeutic Exercises**

- Quad/Hamstring/Adductor/Gluteal sets – Straight leg raises/Ankle pumps
- DO NOT overload graft. Avoid twisting, rotational and shearing forces.
- AVOID open chained exercises between 40-70 degrees of flexion!
- Only passive knee extension during first 6 weeks

#### **Modalities:**

- Ice, elevation, compression
- Scar massage
- Others at discretion of therapist

### **Phase II (Weeks 2-6)**

#### **Bracing:**

- Continue hinged knee brace locked in extension up to 6 weeks post op. Remove for rehab with PT and for CPM

#### **Weight bearing:**

- Continue non weight bearing

#### **Range of Motion:**

- 75 degrees by week 4
- 90 degrees by week 5-6
- 115-125 degrees by week 8
- 125-135 degrees by week 10-12

#### **Therapeutic Exercises**

- Continue with Quad/Hamstring/Core strengthening.
- DO NOT overload graft. Avoid twisting, rotational and shearing forces.
- AVOID open chained exercises between 40-70 degrees of flexion!
- Only passive knee extension during first 6 weeks

**Modalities:**

- Ice, elevation, compression
- Scar massage
- Gentle patellar mobilizations
- Others at discretion of therapist

**Phase III (Weeks 6-12)**

**Bracing:** May discontinue brace (usually at week 6)

**Weight bearing:**

- Gradually return to full weight bearing

**Range of Motion:**

- May increase range of motion as tolerated

**Therapeutic Exercises**

- Begin closed chain exercises – wall sits/shuttle/mini-squats/toe raises
- Gait training
- Continue with Quad/Hamstring/Core strengthening
- Begin unilateral stance activities
- May introduce stationary bicycle with no resistance as tolerated
- AVOID open chained exercises between 40-70 degrees of flexion!
- Heavy resisted open kinetic chain exercises should be avoided for at least 9-12 months postoperatively!
- May use pool therapy

**Phase IV (Months 3-6)**

**Weight bearing:**

- Full weight bearing with a normal gait pattern

**Therapeutic exercise**

- Advance closed chain strengthening exercises, proprioception activities
- May start light nonimpact activities at 6 months
- Heavy resisted open kinetic chain exercises should be avoided for at least 9-12 months postoperatively!

**Phase V (Months 6-18)**

Continue strengthening

Sport specific training

Full return to sports / activities usually NOT until 12-18 months