

**Division of Pediatric Orthopaedics**

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**DISTAL SEMITENDINOSUS TENDON DEBRIDEMENT  
POST-OPERATIVE PHYSICAL THERAPY PROGRAM**

**PHASE I: MAXIMUM PROTECTION PHASE (Weeks 1-4)**

**Goals:** Reduce inflammation/effusion  
Allow early healing  
Full passive knee extension  
Gradually increase knee flexion  
Restore quadriceps voluntary activation

**Restrictions:** No active knee flexion for 4 weeks  
No passive hamstring stretching for 3 weeks

**Stage 1: Immediate post-surgery days 1 through 10**

- Ice, compression, elevation
- Compression wrap dressing
- Crutches as needed
- ROM (passive 0-90) to tolerance
- Patellar mobilizations
- Stretch calf, hip flexors, lumbopelvic musculature
- Strengthening exercises (neuro-muscular electrical stimulation to quads):
  - Quad sets
  - SLR flexion
  - Hip Abd/Adduction
  - Knee extension 90-40 degrees
- Mini Squats 0-50/60 degrees
- Avoid active resisted knee flexion

**Stage 2: Weeks 2 through 4**

- Discontinue crutches when able

- Continue use of ice and compression
- Continue compression wrap
- ROM guidelines
  - Gradually increase PROM as tolerated
  - Week 2: 0-125 degrees
  - Week 3: 0-135 degrees
  - Week 4: 0-145 degrees

\*Discontinue crutches when safe and proper gait (usually during week 2)

- Continue PROM exercises and stretching
- Strengthening exercises (see attached sheet Phase I exercises)
  - SLR (all 4 planes)
  - Knee extension 90-0 degrees
  - CKC mini-squats 0-45 degrees
  - CKC wall squats 0-60 degrees
  - Initiate CKC exercises
    - Lateral and front step overs (week 4-6)
    - Lateral lunges (week 4-6)
    - Step downs (lateral)
    - Step downs (front)
- Bicycle
- Pool exercises (once incision is fully healed)

## **PHASE II: INTERMEDIATE PHASE (Weeks 4-6)**

**Goals:** Full PROM  
 Minimal to no swelling/inflammation  
 Restore quadriceps strength  
 Gradually increase functional activities  
 Initiate light active hamstring strengthening

- Continue use of ice and compression as needed
- Continue ROM and stretching to maintain 0-135 degrees
- Progress strengthening exercises
  - Leg press 70-0 degrees
  - Knee extension 90-40 degrees
  - Hip Abd/Adduction
  - Wall squats 0-70 degrees
  - Vertical squats 0-60 degrees

- Lateral step-ups
  - Front and lateral lunges
  - Hamstring curls
  - Balance/proprioception training
  - Biodex stability
  - Squats rocker board
  - Cup walking (step overs)
  - Standing on foam single leg
  - Bicycle (if ROM permits)
  - Pool program (may begin running in pool)
  - Elliptical
- May be able to begin running if cleared by physician or medical team
  - Can initiate 45-60 ft phase of Interval Throwing Program

### **PHASE III: ADVANCED ACTIVITY PHASE (Weeks 6-8)**

**Goals:** Improve strength and endurance  
 Maintain full ROM  
 Gradually increase applied stress  
 Progress to 90" phase of ITP

#### Week 6

- Continue all strengthening exercises listed above (Phase II and III activities) see attached sheet
- May initiate stair stepper if appropriate
- Treadmill walk/run program

#### Week 7

- Continue strengthening and stretching program

### **PHASE IV: RETURN TO ACTIVITY PHASE (Week 8 and beyond)**

**Goals:** Improve strength and endurance  
 Prepare for unrestricted activities  
 Prepare for flat ground throwing

### Criteria to progress to Phase IV

- Full non-painful ROM
- No pain or tenderness
- Satisfactory clinical exam
- Satisfactory isokinetic test

### Exercises

- Continue and progress all strengthening exercises and stretching drills
- Deep squatting permitted at 3-4 months
- Initiate straight line running: 12 weeks
- Initiate pivoting and cutting: 4 months
- Initiate agility training: 4 months
- Gradually return to sports: 4-6 months