

## Open Patellar Tendon Repair Rehabilitation

### Phase 1: Maximum Protection Phase (Weeks 1-4)

**Goals:** Control inflammation/effusion  
Allow early healing  
Full passive knee extension  
Gradually increase knee flexion  
Independent quad. Control

#### Stage 1: Week I \*\*\*NO quad activation\*\*\*

- Ice, compression, elevation
- Brace locked at 0 degrees for ambulation and sleeping only
  - Brace may be unlocked during sitting etc.
- ROM (Passive 0-45)
- Strengthening exercise:
  - Sitting Passive Heel Slides
  - Long Sit Hamstring Stretch
  - Ankle Pumps

#### Stage 2: Weeks 2-4 \*\*\*Begin isometric co-contraction of quads\*\*\*

- Continue use of ice and compression
- Brace locked for ambulation
- ROM Guidelines
  - Gradually increase PROM
  - Week 2: 0-90 degrees
  - Week 4: 0-115 degrees
- Strengthening Exercises:
  - SLR (all 4 planes)
  - Heel Slides to 90
  - Long Sit Hamstring Stretch
  - Heel digs (Hamstring isometric contraction)
  - Calf raises (standing)
  - Standing locked steamboats
  - Marching steps forward backward and sideways

### Phase 2: Moderate Protection Phase (5-8 weeks)

**Goals:** Full PROM  
No Swelling/inflammation  
Re-establish muscle control  
Proper gait pattern

Week 5: Ambulate with brace ROM set to 100

- Continue use of ice and compression
- Continue ROM and progress to 0-135 Degrees
- Progress strengthening exercises Phase I

- Heel slides to full ROM
  - Long sit hamstring stretch
  - Knee extension 90-0 Degrees
  - Standing hamstring curls
  - Begin Level Two agility
    - Cup walking
    - Planks
    - Bridging
    - Steamboats 4 way (involved leg down)
    - Ball roll: for, side and back (involved leg down)
    - Heel raises
  - Light strengthening: Short range leg press, 4-Way hip, leg extension 90-45, Dead lifts
  - Bicycle (as ROM permits)
  - Initiate treadmill for endurance (3.5mph fast walk then progress to light jog at 14 weeks)
  - Pool Program
- \*Avoid* twisting, deep squatting, stooping, no lunges!!!

### Phase 3: Controlled Activity Phase (9-16)

**Goals:** Improve strength and endurance  
Maintain Full ROM  
Gradually increase applied stress

#### Week 9 -11

- Continue all strengthening exercises listed above
- Initiate Dynamic warm-up
- Initiate Form Stepping (progress from walk pace to fast step pace and no lunge)
- Initiate light resistive hamstring curls
- Toe calf raises
- Progress balance training
- Progress to Phase II strengthening program

#### Week 12 –week 15

- Continue Strengthening and stretching program
- Continue dynamic warm-up (now can include lunges)
- Form running: progress from fast pace walk to trot to jog pace (now include lunges)
- Begin step ups and step downs
- Initiate pool running

## Phase 4: Return to Activity Phase (4-6 month)

**Goals:** Improve strength and endurance  
Prepare for unrestricted activities

### Criteria to Progress to Phase 4

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

### Exercises

- Continue and progress all strengthening exercises and stretching drills
- Initiate straight line running at 4 months
- Initiate controlled pivoting and cutting: 5 months
- Deep squatting permitted at 5 months
- Initiate controlled agility training: 4 ½ months
- Initiate jumping program at 5 months: Ankle jumps, two-legged hop, two –legged jumps, single leg, etc...
- Gradually return to sport drills at : 5 months
- Non contact practice 6 months
- Full competition non contact sports 7 months
- Full competition full contact 8 months