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 1 ***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
o Heel slides to full ROM
o Long sit hamstring stretch
o Knee extension 90-0 Degrees
o Standing hamstring curls
• Begin Level Two agility
  o Cup walking
  o Planks
  o Bridging
  o Steamboats 4 way (involved leg down)
  o Ball roll: for, side and back (involved leg down)
  o 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