

Rehabilitation Protocol: Patellar Tendon Rupture

Phase I: Immobilization and Rehabilitation (4-13 days)

- **Goals**
 - o Control pain and inflammation
 - o Maintain patellar mobility
 - o Maintain hamstring strength of the ipsilateral leg and lower extremity strength of the contralateral leg
 - o Active knee flexion to 45° and passive knee extension to 0°
- **Intervention:**
 - o Crutch training with toe-touch weight-bearing
 - o Ice and elevation
 - o Isometric ipsilateral hamstring exercise, contralateral LE strengthening
 - o Gentle medial/lateral patellar mobilization (~25%)
 - o AROM, AAROM and PROM
 - o Hinged knee brace locked in extension

Phase II: Immobilization and Rehabilitation (2-4 weeks)

- **Goals**
 - o Control pain and inflammation
 - o Begin weight-bearing
 - o Maintain patellar mobility
 - o Active flexion to 90° and passive knee extension to 0°
 - o Maintain ipsilateral hamstring and contralateral LE strength
 - o Begin ipsilateral quadriceps retraining
- **Intervention**
 - o Crutch training with partial weight-bearing (25-50%)
 - o Ice and elevation
 - o Isometric ipsilateral hamstring exercise, contralateral LE strengthening
 - o Gentle medial/lateral patellar mobilization (~25%)
 - o AROM, AAROM and PROM
 - o Hinged knee brace locked in extension
 - o Ipsilateral quadriceps sets (NO straight leg raises)

Phase III: Immobilization and Rehabilitation (4-6 weeks)

- **Goals**
 - Control pain and inflammation
 - Progress weight-bearing (possibly discontinue crutch use)
 - Active flexion progressed as tolerated and passive extension to 0o
 - Maintain patellar mobility
 - Maintain ipsilateral hamstring and contralateral LE strength
 - Continue ipsilateral quadriceps retraining
- **Intervention**
 - Progress to weight-bearing as tolerated, may discontinue crutch use if good quadriceps control is acquired
 - Gait training
 - Ice and elevation
 - Isometric ipsilateral hamstring exercise, contralateral LE strengthening
 - Gentle medial/lateral patellar mobilization (~25%)
 - AROM, AAROM and PROM
 - Hinged knee brace locked in extension
 - Ipsilateral quadriceps sets (NO straight leg raises)

Phase IV: Immobilization and Rehabilitation (6-12 weeks)

- **Goals**
 - Control pain and inflammation
 - Progress to full active ROM
 - Maintain patellar mobility
 - Maintain ipsilateral hamstring and contralateral LE strength
 - Continue ipsilateral quadriceps retraining
- **Intervention**
 - Weight-bearing as tolerated
 - Gait training
 - Hinged knee brace locked in extension until good quadriceps control and normal gait are obtained
 - Ice and elevation
 - Isometric ipsilateral hamstring exercise, contralateral LE strengthening
 - Gentle medial/lateral patellar mobilization (~50%)
 - AROM
 - Ipsilateral quadriceps strengthening (straight leg raises without resistance and stationary cycling at 8 weeks)

Phase V: Rehabilitation (12-16 weeks)

- **Goals**
 - o Complete weight-bearing
 - o Progress ipsilateral quadriceps strength
 - o Begin neuromuscular retraining
- **Intervention**
 - o Gait Training
 - o No immobilization
 - o Ipsilateral quadriceps strengthening
 - o Proprioception and balance activities (including single leg support)

Phase VI: Rehabilitation (16-24 weeks)

- **Goals**
 - o Begin running
 - o Sport/job specific training
- **Intervention**
 - o Progress program as listed for Phase IV, with sport or job specific training

Phase VII: Rehabilitation (> 6 months)

- May begin jumping and contact sports when ipsilateral strength is 85-90% of contralateral extremity