



## **PATELLAR-FEMORAL PAIN SYNDROME / PATELLAR TENDONITIS**

### **General Principles:**

Patellar-femoral pain syndrome (PFPS) is a relatively common condition involving inflammation, irritation or injury to the articular cartilage surface of the patellar-femoral articulation. The protocol may be used for patellar tendonitis or post-arthroscopy patients having undergone a procedure involving the patellar-femoral articulation (i.e, chondroplasty, lateral patellar retinacular release, etc.).

### **PHASE I (Acute/Immediate Post-Op) Week 1**

#### Weight Bearing

1. Post-op patients may progress to weight bearing using two crutches.
2. May discontinue crutches when normal gait achieved.

#### Modalities

1. Ice massage.
2. Electrical stimulation.
3. Pulsed or continuous low-frequency ultrasound.
4. Phonophoresis with 10% hydrocortisone in ultrasound gel.
5. May use compression and elevation as needed for post-op pain and swelling management.
6. Ice for 20 minutes post activity throughout protocol.

#### Orthotics

1. Post-op patients may progressively discontinue knee immobilizer as tolerated.
2. All patients may use patellar neoprene knee sleeve or Cho-pat®, Levine or Fluk™ strap as needed.

#### Exercises

1. Quadriceps/hamstring sets
2. Knee ROM.
3. Wall and heel slides to progress ROM to full as tolerated.
4. Hamstring, calf, hip iliotibial band stretching.
5. Straight leg raises
  - a. Four planes.
6. Ankle pumps
7. Manual biofeedback and neuromuscular re-education.

### **PHASE II (Intermediate) Weeks 2 - 3**

#### Weight Bearing

1. Full as tolerated.

#### Modalities

1. Continue Phase I modalities as needed.

### Orthotics

1. Continue orthosis of choice as needed.

### Exercises

1. Advance Phase I exercises as tolerated.
2. Proprioceptive exercises:
  - a. Bilateral, progress to unilateral as tolerated.
  - b. BAPS® board or K.A.T. device for balance training.
3. Strengthening exercises as AROM improves:
  - a. Progress to resistance with SLRs as tolerated.
  - b. Short arc quadriceps exercises
    - i. Terminal knee extensions, no resistance to start.
    - ii. Progress with cuff weights as tolerated.
  - c. Closed chain exercises
    - i. Stationary bike
    - ii. Leg Press or Plyosled, bilateral, low resistance.
4. Aquatics as needed
  - a. Cycling.
  - b. Straight leg flutter kicks.

## **PHASE III (Advanced) Weeks 4 - 6**

### Modalities

1. Continue Phase II modalities as needed.

### Orthotics

1. Continue as needed during exercise.

### Exercises

1. Advance Phase II exercises as tolerated.
2. Criteria to progress to Phase III strengthening:
  - a. Full, non-painful AROM.
  - b. No pain with Phase II exercises.
3. Strengthening exercises:
  - a. Progress to full-arc hamstring/quadriceps isotonic as tolerated.
  - b. Closed chain exercises:
    - i. Progress stationary bike.
    - ii. Leg Press or Plyosled, progress to unilateral, increase resistance as tolerated.
    - iii. Stair master, elliptical cross trainer, or ARC trainer, progress as tolerated.
    - iv. Lateral step-up
    - v. Mini-squats, progress with TheraBand™ as tolerated.
    - vi. If a patient has 65% strength of contra-lateral leg and no pain with activity, may progress to running program.

## **Weeks 7 - 8**

### Exercises

1. Advance Phase III exercises:
  - a. Resistance
  - b. Reps
2. Progress to bounding on Plyosled as tolerated.
3. Jump rope
4. Lunges with resistance as tolerated.
5. Advance running program.
6. Consider dismissing from formal physical therapy when strength and functional goals have been met.