

## **Patella Femoral Syndrome Protocol**

# **Rehabilitation Guidelines**

NOTE: Advancement to next phase is determined on individual clinical presentation and not time based.

### **Phase I – Acute Phase**

#### **Goals:**

- Decrease effusion/pain
- Restore pain-free knee ROM
- Initiate volitional quadriceps contraction
- Begin pain-free flexibility program
- Minimize patellofemoral joint reaction forces

#### **Flexibility**

- PROM/AAROM to maintain ROM
- High-Crank Bicycle without resistance (avoid for compressive PFS)
- Flexibility exercises (hamstrings, quadriceps, iliotibial band, gastrocnemius)
- Lateral/medial retinacular stretching

#### **Strengthening**

- Multi-angle isometric quadriceps sets
- 4 way SLR
- Heel raises
- Hamstring curls
- Mini-squats
- Weight shifts M/L and diagonal

#### **Additional Therapeutic Interventions**

- Taping/bracing if indicated (avoid taping if compressive PFS)
- Orthotics- if indicated
- Electrical stimulation
- Cryotherapy

### **Phase II – Sub-Acute**

#### **Criteria for progression:**

- No increase in swelling
- Minimal pain with strengthening
- No instability

#### **Goals:**

- Continue to minimize patellofemoral joint reaction forces
- Avoid intensification of symptoms
- Restore full symmetrical ROM
- Restore strength

**Flexibility**

- PROM/AAROM to maintain ROM
- High-Crank Bicycle with resistance to tolerance (avoid for compressive PFS)
- Flexibility exercises(hamstrings, quadriceps, adductors, iliotibial band, gastrocnemius)
- Lateral/medial retinacular stretching

**Strengthening**

- Continue above strengthening and flexibility exercises
- Continue strengthening program with PRE's (emphasize quadriceps, hip extensors, hip external rotators and hip abductors) slight flexion with resisted flexion SLR
- Continue multi-angle isometrics
- Closed-chain concentric and eccentric strengthening (shuttle, leg press, mini-squats, step-ups etc)
- 4-Way TB at ankle quick for time (3 x 20 sec.)
- Eccentric ER with lateral step-ups, limited ROM squats with weight and TB resisted ER
- Wobbleboard
- Retro cone walking

**Additional Therapeutic Interventions**

- Taping/bracing if indicated (avoid taping if compressive PFS)
- Orthotics- if indicated
- Electrical stimulation
- Cryotherapy

**Phase III – Maintenance/Return to Activity Phase****Criteria for progression:**

- No instability
- No swelling/tenderness
- Full pain-free ROM

**Goal:**

- Continue strengthening/flexibility program
- Proprioception training
- Endurance exercises
- Cross training (cycling, stairmaster, swimming)
- Initiate agility program, sport-specific activities

**Flexibility**

- PROM/AAROM to maintain ROM
- High-Crank Bicycle with resistance to tolerance (avoid for compressive PFS)
- Flexibility exercises(hamstrings, quadriceps, adductors, iliotibial band, gastrocnemius)
- Lateral/medial retinacular stretching

### **Strengthening**

- Continue above strengthening and flexibility exercises
- Lunges with short angle
- Progress agility training
- Progress balance training with balance board
  - DL-SL
  - Add perturbation
  - Add ball toss

### **Additional Therapeutic Interventions**

- Taping/bracing if indicated (avoid taping if compressive PFS)
- Orthotics- if indicated
- Electrical stimulation
- Cryotherapy