

# Orthopaedic Sports Specialists, P.C.

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## **PATELLAR PROTECTION PROGRAM**

*This five-phased program approach can be utilized for both conservative and surgical patellofemoral clients. This systematic approach allows specific goals and criteria to be met; once goals and criteria are attained, the rehabilitation can progress safely. Client compliance is critical.*

### **Ultimate Goal of Program**

1. Improve Functional Status
2. Normalized biomechanical Forces
3. Improve Strength/Power/Endurance
4. Decrease Pain/Inflammatory Status

### **Acute Phase - Maximal Protection**

GOALS: Relieve Pain and Swelling

Decrease inflammation

Retard muscle atrophy

Maintain/increase flexibility

- Weight bearing as tolerated, crutches may be indicated (normal gait)
- Ice, compression, elevation
- Anti-inflammatory medication (aspirin or nonsteroidal)
- Strengthening exercises (isometric)
  - quadriceps setting
  - multitriangle isometrics (non-painful) 90,75,60,45,30
  - straight leg raises (four planes of motion)
    - hip adduction, hip flexion stressed
  - hip abduction not done with lateral compression synd.
- Electrical stimulation (EMS, TNS, HVGS, Biofeedback)
- Flexibility
  - stretches (especially hamstrings, gastroc)
- Intermittent passive motion
- Brace when indicated
- Patient education regarding activities, pathomechanics
- Avoidance program
  - squatting, kneeling, excessive knee flexion, stairs

### **Subacute Phase - Moderate Protection**

Progress to phase two when: pain and swelling reduced, ROM is increased, Strong visible quadriceps contraction

**Goals** - *Increase Muscle Strength Without Exacerbation*

- Initiate weights for SLR
- Isotonics, short arc (90 - 40 ) non-crepitus ROM
- Initiate mini-squats (0-30/40 ) non-painful ROM
- Bicycle (low resistance, seat high)
- Swimming
- Pool program for walking/running
- Continue isometrics
- Continue flexibility exercises
- Continue ice therapy, anti-inflammatory drugs
- Avoidance program
  - squatting, kneeling, stairs, excessive knee flexion
- Evaluate for orthotics

**Chronic Phase - Minimal Protection**

Progress to phase 3 when: ROM and swelling WNL Pain is minimal to none

**GOAL:** *Achieve Maximal Strength & Endurance*

- Continue SLR
- Knee flexion isotonics with resistance is begun
- Variable resistance isotopic weight training
- (blocking painful ROM)
  - Continue shortened range knee extension isotonics
  - Continue mini-squats
- Emphasis on increased functional activities
- Ice therapy post exercise
- Avoidance Program
  - squatting, painful ADL's

**Maintenance Program**

- Continue flexibility daily (part of warm-up and cool down)
- Continue PRE program 3 times a week
- Endurance training is continued
- Continue to be active (walking, swimming, pool running, possible biking)

**GOAL:** *Continue to strengthen without deteriorous affects on patellofemoral joint*