

## **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. Normalize 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

Weightbearing as tolerated, crutches may be indicated (normal gait)

Ice, compression, elevation

Anti-inflammatory medication (Aspirin or nonsteroidal)

Strengthening exercises (isometric)

- quadricep setting
- multiangle 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 syndrome

Electrical stimulation (EMS, TNS, HVGS, Biofeedback) to quadriceps

Balance of soft tissue

- LE flexibility stretches (especially hamstrings, gastroc)

Intermittent passive motion

Brace when indicated (patellar stabilizing brace)

Patient education regarding activities, pathomechanics

Avoidance program

- squatting, kneeling, excessive knee flexion, stairs, repetitive activities

### **Subacute Phase – Minimal Protection**

GOALS: Restore soft tissue balance  
Progress strengthening program  
Enhance proprioception

Continue previous exercises

Progress strengthening program

- Leg press \*
- Hip abduction/adduction
- Hip ER/IR
- Front lunge onto box
- Mini-squat \*
- Wall squat \*

\* May add concomitant isometric abduction or adduction depending on pathology

Proprioceptive drills

- Weight shifts
- Mini squats on unstable surface
- Balance on unstable surface

Assess biomechanical faults/control forces to knee

- Hip strength & flexibility
- Core strength & stability
- Foot mechanics (may fabricate orthotics)
- May continue use of brace

### **Chronic Phase – Progressive Strengthening**

Progress to phase three 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 isotonic weight training  
(blocking painful ROM)

- continue shortened range knee extension isotonics
- continue closed kinetic chain exercises

Emphasis on increased functional activities

Dynamic stability drills

- Sport cord lunges
- Core drills
- Lunge/step up on unstable surface
- Single leg balance on unstable surface

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 deteriorious affects on patellofemoral joint

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