

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

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