

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.

Primary goal is non-painful activities.

Focus of the program is hip abduction, ER, & extension strengthening.

Ultimate Goal of Program

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

I. 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 (Physician decision)

Strengthening exercises (isometric & istic)

quadri-cep setting

multiangle isometrics (non-painful) 90°, 75°, 60°, 45°, 30°

straight leg raises (3 planes of motion)

hip abduction

hip extension

hip flexion

Electrical stimulation (EMS) to quadriceps

hip ER strengthening with theraband

sidelying clams

mini squats with theraband around distal thigh (hip abduction with squatting)

Bilateral bridging

Balance of soft tissue

LE flexibility stretches (especially hamstrings, quadriceps, gastroc & soleus)

Brace when indicated

Patient education regarding activities, pathomechanics

Avoidance program

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

II. Subacute Phase – Minimal Protection

GOALS: Restore soft tissue balance
Progress strengthening program (especial hip abduction, ER, extension)
Enhance proprioception

Continue previous described exercises above

Progress strengthening program

- Leg press *
- Hip abduction
- Hip ER
- Side lying clams
- RDLs
- Unilateral bridging
- Lateral slides with theraband
- Mini-squat * (0-45⁰)
- Wall squat * (0-70⁰)
- Prone plank with hip extension

* May add concomitant isometric abduction or adduction depending on pathology

Proprioceptive drills

- Mini squats on unstable surface (may add perturbations)
- 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: Pain is minimal, strength improving and no severe functional limitations

GOALS: Achieve Maximal Strength & Endurance
Improve functional activities

Continue all strengthening listed above

Initiate the following:

- Star drill
- Bosu ball balance
- Perturbation drills

Emphasis on increased functional activities

- Front step downs with hip abduction resistance (theraband)

Dynamic stability drills:

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

Continue stretching:

Quads
Hip flexors
Hamstrings
Calf muscles

Ice therapy post exercise
Laser post treatment

Avoidance Program:
Deep squatting, painful ADL's & anything painful

III. Maintenance Program

Continue Flexibility Daily (part of warm-up and cool down)
Continue PRE Program 3-4 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