

Associate Professor of Orthopaedics Chief - Division of Sports Medicine Tel: (212) 598-6784

## **Patellar Protection Program**

Name:	Date:
Diagnosis:	Date of Surgery:
This five-phased program approach can be utilized for be clients. This systematic approach allows specific goals attained, the rehabilitation can progress safely. Client co	nd criteria to be met; once goals and criteria are
<ul> <li>Ultimate Goals of Program</li> <li>Improve functional status</li> <li>Normalize biomechanical forces</li> <li>Improve strength/power/endurance</li> <li>Decrease pain/inflammatory status</li> </ul>	
<ul> <li>Goals:         <ul> <li>Relieve pain and swelling</li> <li>Decrease inflammation</li> <li>Retard muscle atrophy</li> <li>Maintain/increase flexibility</li> </ul> </li> <li>Weight-bearing as tolerated, crutches may be indicated. Ice, compression, elevation</li> <li>NSAIDs</li> <li>Strengthening exercises (isometric)         <ul> <li>Quadriceps setting</li> <li>Multiangle isometrics (non-painful) 90°, 75°,</li> <li>Straight leg raises (four planes of motion)</li> <li>■ Hip adduction, hip flexion stressed</li> <li>■ Hip abduction not done with lateral complexity</li> <li>Electrical stimulation (EMS, TNS, HVGS, Biofeedback)</li> </ul> </li> <li>Flexibility         <ul> <li>LE stretches (especially hamstrings, gastroc)</li> <li>Intermittent passive motion</li> <li>Brace when indicated</li> <li>Patient education regarding activities, pathomechanic</li> <li>Avoidance Program</li> </ul> </li> </ul>	60°, 45°, 30°  ompression syndrome
SUBACUTE PHASE -MODERATE PROTECTION  • Criteria to Enter Subacute Phase:  ○ Pain and swelling reduced  ○ ROM increased  ○ Strong visible quadriceps contraction	

- Goals
  - o Increase muscle strength without exacerbation
- Initiate weights for SLR
- Isotonics
  - o Short arc (90-40°), non-crepitus ROM
- Initiate mini-squats (0-30/40°), non-painful ROM

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- Bicycle (low resistance, seat high)
- Swimming
- Pool program for walking/running
- Continue isometrics
- Continue flexibility exercises
- Continue ice therapy, anti-inflammatory drugs
- Avoidance Program
  - o Squatting, kneeling, stairs, excessive knee flexion
- Evaluate for orthotics

## CHRONIC PHASE -MINIMAL PROTECTION

- Criteria to Progress to Phase IV:
  - o ROM and swelling WNL
  - o Pain is minimal to none
- Goals:
  - 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
  - o Continue mini-squats
- Emphasis on increased functional activities
- Ice therapy post-exercise
- Avoidance Program
  - Squatting, painful ADLs.

## **MAINTENANCE PROGRAM**

- Goal
  - o Continue to strengthen without deleterious effect on patellofemoral joint
- 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)

Comments:		
Frequency: times per week	Duration: weeks	
Signature:	Date:	