

Therapist \_\_\_\_\_

## REHABILITATION FOLLOWING LATERAL RETINACULAR RELEASE And MEDIAL RETINACULAR THERMAL SHRINKAGE

### I. IMMEDIATE POST-OPERATIVE PHASE

**Goals:** Diminish swelling/inflammation (control hemarthrosis)  
Initiation of quadriceps muscle training  
Control stresses to medial retinacular  
Medial mobilization of patella  
Independent Ambulation

Weight Bearing: Two crutches weight bearing as tolerated (50%-75%)

Swelling/

Inflammation Control: Cryotherapy  
Lateral "C" buttress pad  
Compression Bandage  
Elevation & Ankle Pumps

Range of Motion: ROM to 45-50 degrees  
At least 45-55 degrees flexion by day 2-3  
Patellar mobilization (especially medial), NO Lateral Glides\*

Muscle Retraining: Quadriceps isometrics  
Straight Leg Raises (Flexion)  
Hip Adduction  
\* Knee Extension (painless arc)

Flexibility: Hamstring Stretches  
Calf Stretches  
AAROM Knee Flexion (to 45-55 degrees)

### II. ACUTE PHASE (Week 0-4)

**Goals:** Control swelling/inflammation  
Control stresses to medial retinacular  
Gradual Improvement in ROM  
Quadriceps Strengthening (Especially VMO)

Note: Rate of progression based on swelling/inflammation and patellar stability.

Weight Bearing: Two crutches for 2 weeks (75%)  
<sup>b</sup> Progression based upon pain, swelling, and quad control.

Progress to one crutch week 3  
Discontinue crutch at week 4

Swelling/Inflammation: Continue use of lateral "C" pad  
Compression bandage  
Cryotherapy, elevation 5-6 times/day

Range of Motion: Establish full passive knee extension  
Rate of progression based upon swelling/inflammation and patellar stability  
At least 60-65 degrees flexion (Week 1)  
<sup>b</sup> At least 90 degrees flexion (Week 2)  
<sup>b</sup> At least 105-110 degrees flexion (Week 3)  
<sup>b</sup> At least 110-115 degrees flexion (Week 4)  
Patellar mobilization (especially medial)(gentle lateral mobilization)

Muscle Retraining: Electrical muscle stimulation to quads  
Quad Setting Isometrics  
Straight Leg Raises (flexion)  
Hip Adduction  
Knee Extension 60-0 degrees, painfree arc  
<sup>a</sup> Mini-Squats with adduction (squeeze ball)  
<sup>a</sup> Leg Press (40-100)  
\* Bicycle (Stationary) if ROM/Swelling permits  
Proprioception Training  
-Cup walking, balance drills, balance beam, tilt board squats

Flexibility: Continue Hamstring, Calf Stretches  
Initiate quadriceps muscle stretching (gentle)

### III. SUBACUTE PHASE - MODERATE PROTECTION (Week 5-8)

Goals: Eliminate any joint swelling  
Improve muscular strength and control without exacerbation of symptoms.  
Maintain patellar stability and proper tracking  
Functional exercise movements

Criteria to Progress to Phase III:

1. Minimal inflammation/pain
2. ROM (0-125 degrees)
3. Voluntary quadriceps contraction
4. Excellent patellar stability

Range of Motion: Continue stretching to maintain full passive knee

Gradually improve knee flexion to 0-125 degrees

Exercises:

Continue muscle stimulation to quadriceps (if needed)  
 Quadriceps setting isometrics  
 4 way Hip Machine (hip adduction, abduction, extension, and flexion)  
 \* Lateral Step-Ups (if able)  
 \* Front Step-Ups (if able)  
<sup>a</sup> ½ squats against wall (0-60 degrees)  
<sup>a</sup> Leg Press (45-100 degrees)  
 Knee Extension (90-0 degrees), painfree arc  
 Bicycle  
 Pool Program (walking, strengthening, running)  
 Proprioceptive Training (Continue balance training)

Flexibility:

Continue all stretching exercises for LE  
 Especially hamstrings and calf

Swelling/Inflammation:

Continue use of ice, compression, and elevation, as needed.

**IV. ADVANCED PHASE - MINIMAL PROTECTION (Weeks 9-13)**

Goals:

Achieve maximal strength and endurance.  
 Maintain patellar stability and proper tracking  
 Functional activities/drills

Criteria To Progress to Phase IV:

1. Full Non-Painful ROM
2. Absence of swelling/inflammation
3. Knee extension strength 70% of contralateral knee.

Exercises:

<sup>a</sup> Wall Squats (0-70 degrees) painfree arc  
<sup>a</sup> ½ Vertical Squats (0-60 degrees)  
<sup>a</sup> Leg Press  
 Forward Lunges  
 Lateral Lunges  
 Lateral Step-ups  
 Front Step-ups  
 Knee Extension, painfree arc  
 Hip Strengthening (4 way)  
 Bicycle  
 Stairmaster®  
 Proprioception drills  
 Sport Specific functional drills (competitive athletes)



Continue all stretching  
Continue use of ice as needed

**V. RETURN TO ACTIVITY PHASE (Week 13-26)**

Goal: Functional return to unrestricted work/sport

Criteria to Progress to Phase V:

1. Full Non-Painful ROM
2. Appropriate Strength Level (80% of greater of contralateral leg)
3. Satisfactory clinical exam
4. Normal patellar stability

Exercises: Functional Drills  
Strengthening Exercises (selected)  
Flexibility Exercises

KEW: 1/2000

\* If patient is able to perform painfree.

<sup>a</sup> Exercise can be augmented by hip adduction contraction (ball squeeze).

<sup>b</sup> Progression based upon assessment of pain, inflammation, and quadriceps control.