

Christopher Betz, DO - Orthopedic Surgery & Sports Medicine

Starling Physicians

289 Western Blvd, Glastonbury, CT 06033

(860) 832-4666

**REHABILITATION PROTOCOL
MPFL (MEDIAL PATELLOFEMORAL LIGAMENT) RECONSTRUCTION**

Phase I: Immediate Postoperative Phase (week 1 after surgery)

Goals:

1. Diminish swelling/inflammation (control hemarthrosis)
2. Initiation of quadriceps muscle training
3. Independent ambulation

Weight bearing:

- As tolerated with crutches and brace locked at 0 - 30 degrees of flexion

Swelling/inflammation control:

- Cryotherapy
- NSAIDs
- Elevation
- Ankle pumps

Range of motion:

- ROM to 30 degrees of flexion in brace

Muscle retraining:

- Quadriceps isometrics
- Straight leg raises
- Hip adduction

Flexibility:

- Hamstring stretches
- Calf stretches

Phase II: Acute Phase (weeks 2 to 6 after surgery)

Goals:

1. Control swelling/inflammation
2. Gradual improvement in ROM
3. Quadriceps strengthening (especially VMO)

Note: rate of progression based on swelling/inflammation.

Weight bearing:

- Discontinue crutches when appropriate
- Progress WBAT with brace

Swelling/inflammation control:

- Cryotherapy
- NSAIDs
- Elevation
- Ankle pumps

Range of motion:

- Rate of progression based upon swelling/inflammation
- At least 60 degrees flexion (week 2)
- At least 90 degrees flexion (week 4)
- Full flexion (weeks 6 to 8)

Muscle retraining:

- Electrical muscle stimulation to quads
- Quad setting isometrics
- Straight leg raises (flexion)
- Hip adduction
- Knee extension 60 - 0 degrees, pain free arc
- Bicycle (stationary, in brace) if ROM/swelling permits
- Proprioception training

Flexibility:

- Hamstring stretches
- Calf stretches
- Initiate quadriceps muscle stretching

Phase III: Subacute Phase - Moderate Protection (weeks 6 to 12 after surgery)

Goals:

1. Eliminate any joint swelling
2. Improve muscular strength and control without exacerbation of symptoms
3. Functional exercise movements
4. May discontinue brace

Criteria to Progress to Phase III:

1. Minimal inflammation/pain
2. ROM (0 - near full flexion)
3. Strong quadriceps contraction

Exercises:

- Continue muscle stimulation to quadriceps (if needed)
- Quadriceps setting isometrics
- 4-way hip machine (hip adduction, abduction, extension, flexion)
- Lateral step-ups (if able)
- Front step-ups (if able)
- Squats against wall (0 - 60 degrees)
- Knee extension (90 - 0 degrees), pain free arc
- Bicycle
- Pool program (walking, strengthening, running)
- Proprioceptive training

Flexibility:

- Continue all stretching exercises for LE

Swelling/inflammation control:

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

Phase IV: Advanced Phase - Minimal Protection (weeks 12 to 16 after surgery)

Goals:

1. Achieve maximal strength and endurance
2. Function activities/drills

Criteria to Progress to Phase III:

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

Exercises:

- Wall squats (0 - 70 degrees), pain free arc
- Vertical squats (0 - 60 degrees)
- Leg press
- Forward lunges
- Lateral lunges
- Lateral step-ups
- Front step-ups
- Knee extension, pain free arc
- Hip strengthening (4-way)
- Bicycle
- Stairmaster
- Proprioception drills
- Sport specific functional drills (competitive athletes)
- Jogging program
- Continue all stretching

Phase V: Return to Activity Phase (weeks 16 to 20 after surgery)

Goals:

1. Functional return to work/sport

Criteria to Progress to Phase III:

1. Full non-painful ROM
2. Appropriate strength level (80% or greater of contralateral leg)
3. Satisfactory clinical exam

Exercises:

- Functional drills
- Continue jogging/running program
- Strengthening exercises (selected)
- Flexibility exercises