

Boulder Centre

for Orthopedics & Spine

Brian P. Davis, MD

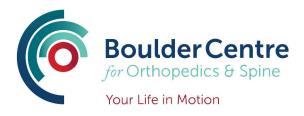
Sports Medicine, Shoulder, Knee, & Elbow Surgeon office: 303.449.2730

# PATELLOFEMORAL JOINT MICROFRACTURE

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POST OPE	RATIVE PR	OTOCOL	

	Phase I – Tissue Protection/Healing Phase (0-8 weeks)
Weight Bearing  □ NWB x wks □ TDWB x wks □ PWB% x wks □ WBAT □ Brace Locked in Ext x wks	GOALS:  1) Reduce pain 2) Facilitate new cartilage formation 3) minimize scar adhesion formation 4) Improve knee ROM 5) Facilitate quadriceps activation  ROM:
ROM    Full ROM   Locked full ext xwks   Locked at° xwks   ROM limits  ° to° xwks   to ° x wks	PROM/AAROM/AROM Bike: Rocking to full revolution as ROM allows  EXERCISE: Quad isometrics SLR—4 way (flex/abd/ext/add) Clamshells Hamstring Isometrics  MANUAL:
° to ° x wks	Patella Mobilization Patellar tendon mobilizxation Extension with overpressure
<b>CPM</b> □° to° xwks  □ 30-70° increase 10°/d @ dir  □ None	MODALITIES: Functional Electrical Stimulation Biofeedback Cryotherapy
□ Recommended Clinical Guidelines  WB: TDWB x 2 weeks  WBAT weeks 3-8  (brace locked in ext)  ROM: CPM or AROM	Criterion for Progression: 1) Voluntary quadriceps isometric contraction 2) No extensor lag with SLR 3) Good patellar mobility 4) Knee ROM full knee extension equaling opposite LE to functional knee flexion Phase II – Tissue Proliferation Phase/Progression Phase (9-12 weeks)
4-8 hours/day x 6-8 wks  Estimated Return to Sport:	GOALS: 1) Pain and edema control 2) Maximize knee ROM 3) Strength progression-develop functional quad control 4) Achieve normal gait
	ROM: PROM/AAROM/AROM Stationary Bike for ROM
Notes:	EXERCISE:  Squats/leg press (60°-0°) Closed chain terminal knee extension Calf Raises LAQ OKC Weight shifting/balance/perturbation training Bridging progression Step ups, Step downs, lateral step downs
	MANUAL: Scar mobilization Patellar mobilization  MODALITIES:

Continue PRN



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#### **CV EXERCISE:**

Biking, Treadmill walking, retro-walking on treadmill, swimming

# Criterion for Progression:

- 1) Minimal to no effusion/edema
- 2) ROM equal to opposite LE
- 3) Full patellar mobility
- 4) Ambulate on level surfaced with normal gait

#### Phase III - Tissue Remodeling/Hypertrophy Phase (12-24 weeks)

#### **GOALS**

- 1) Normalize eccentric quad control
- 2) Strength progression
- 3) Begin sport specific agility drills

#### ROM:

**PRN** 

#### **EXERCISE:**

Advanced strength/proprioception/balance Full squat to 90° (as tolerated) Single leg squat to 60° (as tolerated) Initiate jogging progression Lateral motion/stepping

#### **CV Exercise:**

Outdoor walking/hiking Swimming

# Criterion for Progression:

- 1) No pain or edema/effusion
- 2) Full ROM
- 3) 20 reps to 60 degrees single limb squat with eccentric control and good lower extremity alignment
- 4) Quad strength >80% of uninvolved LE (10RM single leg press or isokinetically if available)

### Phase IV - Sport Specific Training (6 months+)

If desired by and patient and cleared by MD

## **GOALS:**

- 1) Begin sport specific drills
- 2) Normalize neuromuscular control
- 3) Normalize jumping/landing mechanics if indicated
- 4) Return to sport

#### **EXERCISE:**

Agility progression

Begin plyometric progression

Jogging progression/sports-specific training

# Criterion for Return to Sport:

(Recommend combination testing of strength, agility, and power according to available resources/clinic setting)

- 1) Lower Extremity Functional Test (LEFT)
- 2) Hop Tests Single Hop, X-Hop, Triple Hop, Timed Hop >=85% uninvolved
- 3) Single leg squat to 60 degrees knee flexion with good control for 3 minutes
- 4) Quad strength > 90% of uninvolved (10RM leg press or isokinetic testing)
- 5) IKDC (MCID 6.3@ 6mo; 16.7 @ 12 mo)