

Brandon Beamer M.D - *Orthopedic Sports Medicine Specialist*

5317 Golden Foothills Parkway
El Dorado Hills, CA 95762

Ph: 530-344-2070 / Fax: 530-748-0332 / www.brandonbeamermd.com



Notes:

**This protocol is designed to serve as a guide for the rehabilitation process. It is not intended to supersede clinical judgment and decision making. Progression through each phase is designed to allow for maximal tissue healing of repaired tissues and is based on scientific evidence and clinical experience*

Estimated Return to Sport / Work:

Phase III – Tissue Remodeling/Hypertrophy Phase (weeks 8-20)

- Goals:**
- 1) Full knee AROM
 - 2) Improve eccentric quad control
 - 3) Strength progression

ROM: PROM/AAROM/AROM (0-MD prescribed limit)

Exercise:

- Standing calf raises
- Standing Mini Squat^{1,2}
- Step up/Down
- Single Leg Balance/Proprioception Exercises
- Lateral Motions/Stepping⁹

CV Exercise:

- Swim^{1,2,3}
- Bike^{1,2,3}
- Elliptical^{1,2,3}

Criterion for Progression:

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

Phase IV – Sport Specific Training (weeks 20+)

- Goals:**
- 1) Begin to sport specific drills
 - 2) Begin jogging progression
 - 3) Normalize neuromuscular control
 - 4) Normalize jumping/landing mechanics if indicated
 - 5) Prepare for return to sport

Exercise:

- OC Knee Flexion Resisted (90-0)^{7,9,11}
- Begin jogging progression (week 20)
- Begin agility progression (week 20)
- Begin plyometric progression (week 20)
- Progress on sport-specific training

Criterion for Return to Sport: (Recommend combination testing of strength, agility, and power according to available resources/clinic setting)³

- 1) No pain or swelling
- 2) Quad strength > 90% of uninjured (10RM leg press or isokinetic testing)¹²
- 3) IKDC (MCID 6.3 @ 6mo; 16.7 @ 12 mo)^{2,4,5,16}
- 4) Confidence Question¹⁷

Brandon Beamer M.D - *Orthopedic Sports Medicine Specialist*

5317 Golden Foothills Parkway
El Dorado Hills, CA 95762

Ph: 530-344-2070 / Fax: 530-748-0332 / www.brandonbeamermd.com



Isolated LCL Repair/Reconstruction

Weight Bearing

- NWB x ____ wks
- TDWB x ____ wks
- PWB ____% x ____ wks
- WBAT
- Brace Locked in Ext x ____ wks

Brace

Brace : ____ weeks

With Sleep: ____ weeks

ROM

- Full ROM
- Locked full ext x ____ wks
- Locked at ____° x ____ wks
- ROM limits
- ____° to ____° x ____ wks
- ____° to ____° x ____ wks
- ____° to ____° x ____ wks

CPM

- ____° to ____° x ____ wks
- 30-70° ↑10°/d @ dir
- None

Recommended Clinical Guidelines

WB: NWB week 1-2
TDWB week 3-4
PWB 25% week 5
PWB 50% week 6-7
FWB week 8

ROM: 0-90 week 1-2
0-120 week 3-6
0-130 week 9-12

Brace: Locked in ext weeks 0-3

Precautions

No tibial ER in knee
flex/ext^{1,2,3,4,5,7}
Brace at all times x 8 weeks
except ROM and bike
Unlock brace with gait when pt
has no quad extension lag

Phase I – Tissue Protection/Healing Phase (weeks 0-3)

- Goals:**
- 1) Reduce pain
 - 2) Reduce effusion
 - 3) Minimize scar adhesion formation
 - 4) Achieve full knee extension ROM
 - 5) Facilitate quadriceps activation
 - 6) Protect from varus stress

ROM: PROM/AAROM/AROM (0-MD prescribed limit)

Exercise: Quad Isometrics^{1,11}
SLR flex/abd (in brace)^{2,8}
Open chain knee extension 90-0^{4,6,7,10}
Seated Calf Press^{4,6}

Manual: Patella Mobilizations^{17,18}
Scar Mobilization^{17,18}

Modalities: Cryotherapy¹²⁻¹⁶
Functional Electrical Stimulation¹¹

Criterion for Progression:

- 1) Voluntary quadriceps isometric contraction
- 2) Full knee extension AROM
- 3) No extensor lag with SLR
- 4) Good patellar mobility

Phase II- Tissue Proliferation Phase/Progression Phase (weeks 4-8)

- Goals:**
- 1) Pain and edema control
 - 2) Progress towards FWB
 - 3) Improve knee AROM
 - 4) Strength progression – develop functional quad control
 - 5) Normalize gait pattern

ROM: PROM/AAROM/AROM (0-MD prescribed limit)
Bike for ROM (when flexion = 105+ degrees)^{1,2,11}

Gait Training/Cone Walking

Exercise: Calf Press (per WB restriction)
Leg Press (70-0)(per WB restriction)^{2,4,6,7,11}

Manual: Continue PRN

Modalities: Continue PRN

Criterion for Progression:

- 1) Minimal to no edema/effusion
- 2) Knee ROM 0-120 degrees
- 3) Full patellar mobility
- 4) Ambulate on level surfaces with good quad control