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## ISOLATED LCL REPAIR/RECONSTRUCTION POST OPERATIVE PROTOCOL

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

**GOALS:**

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

**ROM:**

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

**EXERCISE:**

- Quad Isometrics
- SLR flex/abd (in brace)
- Open chain knee extension 90°-0°
- Seated calf press

**MANUAL:**

- Patella Mobilization
- Scar mobilization

**MODALITIES:**

- Functional Electrical Stimulation<sup>29-32</sup>
- Cryotherapy<sup>33,34,36</sup>

**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 (4-8 weeks)

**GOALS:**

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

**ROM:**

PROM/AAROM/AROM (progression to 0-MD prescribed limit)  
 Bike for ROM (when knee flexion greater than 105°)

**EXERCISE:**

- Calf press (per WB restriction)
- Leg press (70°-0°; per WB restriction)

**MANUAL:** Continue PRN

**MODALITIES:** Continue PRN

**Criterion for Progression:**

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

**Weight Bearing**

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

**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° increase 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

**Precautions:**

- No tibial ER in knee flex/ext
- Brace at all times x 8 weeks except ROM and bike
- Unlock brace with gait when patient has no extension lag

**Estimated Return to Sport:**

6 months

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

#### **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  
Step up/Down  
Single Leg Balance/Proprioception Exercises  
Lateral Motions/Stepping

#### **CV Exercise:**

Swim  
Bike  
Elliptical

#### ***Criterion for Progression:***

- 1) ***No pain or edema/effusion***
- 2) ***20 reps to 60° single leg squat with eccentric control and good lower extremity alignment***
- 3) ***Quad strength >80% of uninvolved 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°)  
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)<sup>3</sup>***

- 1) ***Lower Extremity Functional Test (LEFT)<sup>13</sup>***
- 2) ***Hop Tests – Single Hop, X-Hop, Triple Hop, Timed Hop >=85% uninvolved<sup>1,6,8-11</sup>***
- 3) ***Single leg squat to 60 degrees knee flexion with good control for 3 minutes<sup>7,8,10</sup>***
- 4) ***Quad strength > 90% of uninvolved (10RM leg press or isokinetic testing)<sup>12</sup>***
- 5) ***IKDC (MCID 6.3@ 6mo; 16.7 @ 12 mo)<sup>2,4,5</sup>***