

ISOLATED PCL REPAIR/RECONSTRUCTION POST OPERATIVE PROTOCOL

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

GOALS:

- 1) Reduce pain and effusion
- 2) Minimize scar adhesion formation
- 3) Achieve full extension ROM
- 4) Facilitate quadriceps activation
- 5) Protect against posterior translation of tibia
- 6) Maximize prone exercise; minimize supine exercises
(place rolled towel under proximal tibia during spine exercise)

ROM:

PROM/AAROM (0°-MD prescribed limit)
Gastroc/Soleus/ Hamstring stretch

EXERCISE:

Quad Isometrics
Standing SLR flex/abd/ext (only in brace)
Open chain knee extension 30-0 (**prone or sidelying**)

MANUAL:

Patella Mobilizations
Scar mobilizations
Soft Tissue Mobilization

MODALITIES:

Functional Electrical Stimulation
Cryotherapy

Criterion for Progression:

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

Phase II – Tissue Proliferation Phase/Progression Phase (4-7 weeks)

GOALS:

- 1) Pain and edema control
- 2) Progress towards WBAT gait
- 3) Improve knee ROM
- 4) Strength progression-develop functional quad control
- 5) Normalize gait pattern
- 6) Protect against posterior translation of tibia (until week 6)

ROM:

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

EXERCISE:

Standing weight shifting
Calf Press (per WB restriction)
Shuttle/Leg Press (0°-50°) (per WB restriction)
Prone Knee Flexion (No resistance)

MANUAL:

Continue PRN

MODALITIES:

Continue PRN

Criterion for Progression:

- 1) **Minimal to no edema/effusion**
- 2) **Knee ROM 0°-90°**
- 3) **Full patellar mobility**
- 4) **Non-antalgic gait**

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 x 2 weeks
TDWB x 2 weeks
PWB x weeks 5-7
WBAT week 8

ROM: 0°-60° by week 6
0°-90° by week 8
0°-120° by week 12
0°-130° by week 16

BRACE: Locked 0°/0° x 2 weeks

Precautions

Avoid posterior sagging of tibia.

No open chain resisted hamstrings until 4 months

Estimated Return to Sport:

6 months RTS

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

GOALS

- 1) Full knee AROM
- 2) Improve eccentric quad control
- 3) Strength progression
- 4) Normalize gait without assistive device

ROM:

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

EXERCISE:

Partial Wall Slides (0°-50°)
Squats (0°-50°)
Step Ups
Static Forward Lunges (0°-40°)
Step Downs
Single Limb Stance with perturbation
Balance Board
Begin resisted prone knee flexion at 4 months

CV Exercise:

Pool Walking
Stationary Bike
Treadmill Walking
Elliptical
Stairclimber
Pool Jogging
Swimming

Criterion for Progression:

- 1) ***No pain or edema/effusion***
- 2) ***Full Knee 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)***
- 5) ***Jogging without pain or antalgic gait***

Phase IV – Sport Specific Training (17-30)

GOALS:

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

EXERCISE:

Begin jogging progression (week 20)
Begin agility progression (week 20)
Begin plyometric progression (week 24)
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) **Lower Extremity Functional Test (LEFT)**
- 2) **Hop Tests – Single Hop, X-Hop, Triple Hop, Timed Hop \geq 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)**