

MULTIPLE LIGAMENT KNEE INJURIES (ACL AND PCL REPAIR) CLINICAL PRACTICE GUIDELINE

Progression is time and criterion-based, dependent on soft tissue healing, patient demographics and clinician evaluation. Contact Ohio State Sports Medicine at 614-293-2385 if questions arise.

Rehabilitation Precautions

Weightbearing Guidelines

- Non-weightbearing for 2 weeks, in brace locked in extension
- TDWB - 25% at 2 weeks with brace locked in extension
- WB 25-50% at 5-6 weeks, brace locked in extension
- WBAT at 7 weeks, gradual unlock and wean from brace

ROM

- No knee flexion $>90^\circ$ for 6 weeks
- No active hamstring /OKC Flexion exercises for 8 weeks
- No resistive OKC hamstring exercise for 4 months
- Do not allow proximal tibia to rest unsupported for 12 weeks

Weeks 0-4

Weightbearing	<ul style="list-style-type: none">• Non-weight bearing for 2 weeks, in brace locked in extension• TDWB - 25% at 2 weeks with brace locked in extension
ROM	<ul style="list-style-type: none">• Begin Passive ROM (no forced flexion beyond 90°)<ul style="list-style-type: none">◦ Goal of achieving full terminal knee extension◦ Prone knee flexion with manual anterior drawer to protect PCL• Patellar mobilization• Edema control
Strengthening	<ul style="list-style-type: none">• NMES• Quad Sets• Flexion and abduction SLR, emphasis on eliminating extensor lag
Stretching	<ul style="list-style-type: none">• Hamstring• Gastrocs• Hip flexors
Goals to Progress to Next Phase	<ol style="list-style-type: none">1. Good quad set2. PROM $0-70^\circ$ degrees3. 20 SLR with minimal to no extensor lag4. Minimal to no edema, no reactive effusion with daily activity and partial WB

Weeks 4-6

Weightbearing	<ul style="list-style-type: none"> WB 25-50% at 5-6 weeks, brace locked in extension
ROM	<ul style="list-style-type: none"> Continue passive prone ROM with no forced ROM Patellar mobilization Edema control
Strengthening	<ul style="list-style-type: none"> NMES if needed Quad Sets, SLR
Goals to Progress to Next Phase	<ol style="list-style-type: none"> 1. PROM 0-90° 2. Tolerance of partial weight bearing without residual pain or joint effusion 3. Excellent quad set and SLR with no quad lag

Weeks 6-8

Weightbearing	<ul style="list-style-type: none"> WBAT at 7 weeks, gait training and wean from brace if good quad set is demonstrated
ROM	<ul style="list-style-type: none"> Gradual advancement of prone passive knee flexion Stationary bicycle avoiding deep knee flexion Maintain passive knee extension
Strength	<ul style="list-style-type: none"> CKC (Shuttle) PWB within protected range (10°-40°) Weights shifts and progression to single leg balance Step ups Neuromuscular balance activities
Goals to Progress to Next Phase	<ol style="list-style-type: none"> 1. Normalized gait mechanics 2. PROM 0-110° 3. No reactive effusion 4. Completion of exercises without exacerbation of symptoms

Weeks 8-12

ROM	<ul style="list-style-type: none"> Progress prone flexion to achieve full symmetrical ROM
Strength	<ul style="list-style-type: none"> Active Resisted Knee Extension within protected range (60°-30°) Gradual increased depth of CKC strengthening (0-70°) Step downs Progress Co-contraction single leg stance activities CKC Hamstring exercises.
Goals to Progress to Next Phase	<ol style="list-style-type: none"> Increased strength/stability/proprioception with therapeutic exercise without exacerbation of symptoms No reactive instability or effusion with WB activity Full symmetrical flexion and extension ROM Ability to perform reciprocal stair ascent and descent without compensation or deficit

Weeks 12-16

ROM	<ul style="list-style-type: none"> ROM as needed, progression to elliptical use with proper mechanics
Strength	<ul style="list-style-type: none"> Progress CKC neuromuscular strength, balance and stability exercise Initiate landing mechanic exercise and light plyometric activity in PWB

Weeks 16+ (4 Months)

Strength	<ul style="list-style-type: none"> Increased resistance and endurance with all exercises OKC knee flexion exercises (0-90°) Progress landing mechanics to full WB, double to single leg progression. Initiate walk-jog progression at 5-6 months <ul style="list-style-type: none"> Criteria to initiate jogging <ul style="list-style-type: none"> ≥ 7 /10 on #10 IKDC Questionnaire (Appendix A) Complete single leg hop-downs without medial/lateral knee displacement Normalized ROM Audible rhythmic strike pattern symmetry and no gross visual antalgia Begin agility exercises between 50-75% at 8 months (utilize visual feedback to improve mechanics) <ul style="list-style-type: none"> Side shuffling Hopping Carioca Figure 8 Zig-Zag
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References

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