

University Orthopedics, Inc.  
Sports Medicine Division

## ANTERIOR CRUCIATE LIGAMENT (ACL) WITH MENISCUS REPAIR POST-OP REHABILITATION PROTOCOL

The following is a protocol for postoperative patients following ACL reconstruction and meniscus repair (medial or lateral). The primary goal of this protocol is to protect the reconstruction and while steadily progressing towards and ultimately achieving pre-injury level of activity. Please note this protocol is a guideline. Patients with additional surgery (i.e. collateral ligament repair) will progress at different rates. Achieving the criteria of each phase should be emphasized more than the approximate duration. If a patient should develop an increase in pain or swelling or decrease in motion at any time, activity should be decreased until problems are resolved.

### PHASE I: 0-2 WEEKS POSTOPERATIVE

#### GOALS:

- Progressive decrease in swelling
- AROM: 0 – 90 degrees
- Prevent post-op knee stiffness
- Independent SLR without an extensor lag
- TDWB with crutches and brace

#### ACTIVITIES:

PROM/AAROM/AROM for knee flexion/extension

Heel props, prone hangs, towel extensions for extension

Heel and wall slides for flexion, prone knee flexion

#### Isometrics

Quad sets (0 degrees knee flexion)

Hip adduction (0 and 45 degrees knee flexion)

Hamstring sets (45 degrees knee flexion)

Straight leg raises

All 4 planes

With immobilizer until able to SLR without extensor lag

Pre-gait activities

#### Proprioception

Weight shifting with UE support

#### Patella mobilizations

Modalities and rest to control pain and inflammation

### PHASE II: ~2-4 WEEKS POSTOPERATIVE

#### GOALS:

- Continued progressive decrease in swelling
- AROM 0-90
- Partial WB with crutches
- Independent SLR without extensor lag

#### ACTIVITIES:

AROM/AAROM/PROM to maintain full knee extension and progress flexion (only to 90)

Functional strengthening

OKC exercises: SLR (all 4 planes, progressive resistance), prone ham curls (knee 2" off table, light theraband resistance), SAQ extensions at 90 – 30 degrees

Stationary bike (no resistance)

Gait training / Proprioception with PWB

Modalities as needed to control pain and inflammation

### **PHASE III: ~4-8 WEEKS POSTOPERATIVE**

#### GOALS:

- Swelling <1 cm at knee joint line
- AROM to 90 degrees until 6 weeks then progress to full ROM
- Progressive WB. D/C crutches a 6 weeks post op

#### ACTIVITIES:

Progressive functional strengthening  
Multi-hip/cable column for hip strengthening  
Prone hamstring curls with progressive resistance  
Squats with minimal resistance (standing on theraband and/or light barbell)  
Lunges  
4" – 6" step-ups, step-downs  
Single leg press (<25% BW @ 4 – 6 weeks. <50% BW @ 6 – 8 weeks post-op)  
Stationary bike, treadmill  
Stairmaster (approximately 6 weeks post-op if no patellofemoral symptoms)  
Proprioception  
BAPS, Rocker board  
Unistands (floor and mini tramp)  
Progress ROM  
Modalities as needed to control pain and inflammation  
Gait retraining

AT THIS POINT, SOME PATIENTS MAY HAVE USED UP THEIR ALLOWABLE BENEFITS FROM THEIR INSURANCE COMPANY. HOWEVER, THIS DOES NOT MEAN THE PATIENT IS DONE WITH THEIR REHABILITATION. THE THERAPIST WILL WORK WITH THE PATIENT TO HELP SET UP A PROGRESSIVE HOME EXERCISE PROGRAM IF IT IS NECESSARY. IT IS RECOMMENDED THE PATIENT JOIN A HEALTH CLUB/GYM AT THIS POINT TO MAXIMIZE REHAB POTENTIAL.

### **PHASE IV: ~8-12 WEEKS POSTOPERATIVE**

#### GOALS:

- Pain/effusion free
- Symmetrical ROM
- Single leg press 70% of noninvolved extremity with 1 rep max
- Girth within 2 cm of non-involved extremity
- Pain-free 6" step down with good eccentric control

#### ACTIVITIES:

Advanced CKC strengthening:  
Leg press (unilateral and bilateral)  
Squats: bilateral with barbell, unilateral with theraband  
Lunges: backward, side and traveling lunges; lunges with plyoball overhead  
Bike, stairmaster with progressive increase in resistance  
Proprioception:  
"Plus" outline on mini tramp and/or floor:  
Jumping (approximately 12 – 16 weeks post-op)  
Hopping (approximately 16 – 20 weeks post-op)

### **PHASE V: 12 Weeks to 6 Months**

#### **Average person and recreational athlete:**

At 50% of normal function.

Continue with a strengthening program a minimum of 3 times per week for 6 months

Recreational athlete should also participate in some light agility training to prepare for return to sport phase of rehab.

#### **High-level athlete:**

Progressive running program if the above criteria have been met. Cross train biking and pool activities. Focus on progressive strengthening, running, plyometric and pre-sport activities for preparation for the return to sport phase of rehab.

**PHASE VI (6 Months – 9 Months)**

**CRITERIA FOR RETURN TO SPORTS (APPROXIMATELY 6 - 9 MONTHS POST-OP):**

1. Pain free
2. Symmetrical ROM
3. No effusion
4. Quad Index > 90%
5. Single leg press equal bilateral with 1 rep max test
6. Jogging 2 miles pain free
7. Functional hop testing 90% of non-involved extremity
8. Y-Balance Test: composite score > 90%
9. Functional bracing discussion
10. Discussion with patient about confidence to RTS