



Austin Cole, MD

ACL Reconstruction with MCL Repair/Reconstruction Post-Operative Protocol

Phase I – Maximum Protection

Weeks 0 to 6:

- Brace – 0-90 for 6 weeks
 - Recommend locking in extension for sleep
- Partial weightbearing for 6 weeks
 - 25% week 0-3 week
 - 25-50% Week 3-6
- Knee flexion to 90-100 degrees progressing to full as tolerated
 - Limit to 90 degrees for 3 weeks if meniscus repair
- Emphasize normal gait pattern
 - Heel-toe with crutches
- Avoid isolated hamstring exercises x 12 weeks

Goals

- Reduce inflammation and pain
- 0 degrees of knee extension
- Reduce inflammation
- Normalize patella mobility with manual mobilizations
- Proper gait mechanics asap
- Avoid valgus stress at knee

Exercise progression

- Quadriceps setting using NMES as needed
- Passive and active knee flexion/extension
 - No resistance for 8 weeks
- Multi-plane straight leg raising
 - SLR when no quad lag present
- Open chain hip strengthening
 - No sidelying hip adduction x 8 weeks.

Phase II – Progressive Stretching and Early Strengthening

Weeks 6 to 8:

- Brace – open to 0-90 degrees for ambulation
- Continue using two crutches, with gradual progression of weight bearing
 - Increase WB to FWB over next 2 weeks
- Avoid isolated hamstring exercises x 12 weeks

Exercise progression

- Begin stationary bike with light resistance initially
- Full knee range of motion
- Continue to emphasize patella mobility

- Begin bilateral closed kinetic chain strengthening
 - Bilateral squat
 - Standing hip adduction may begin with resistance proximal to knee
- Step-up progression
- Gait training - normalize gait pattern

Phase III – Advanced Strengthening and Endurance Training

Goals

- Full knee range of motion – avoid hyper-extension

Weeks 8 to 10:

Exercise progression

- Avoid rotational movements for 14 weeks
- Advance stationary biking program (increase intensity)
- Introduce treadmill walking and elliptical trainer
- Begin unilateral closed kinetic chain program
 - Bilateral squat limited
 - Single leg-no valgus

Weeks 10 to 12:

Exercise progression

- Forward/backward elevated treadmill walking
- Deep water pool running progression

Phase IV – Advance Strengthening and Running Progression

Weeks 12 to 20:

Administer preliminary functional test for physician to review before 3 month follow up

Exercise progression

- Progress resistance with squat and lunge strengthening program.
- Lunge progression (retro, walk and split) as indicated
- Begin isolated hamstring exercise, progress slowly
- Bilateral squat/leg press
- Begin light plyometric drills, progress from bilateral to unilateral
- Begin linear jogging (start slow) – week 16 if good quad control
- Progress to lateral and rotational stresses at 18 weeks
- Multi-directional drills at 18-20 weeks

Administer preliminary functional test for physician to review before 3 month follow up

Phase V – Return to Sport

Weeks 20 to 24:

Exercise progression

- Advance ladder, hurdle and plyo box progressions
- Sport specific field/court drills
- Strengthening program

Criteria to be released for return to sport

- Follow-up examination with the physician
- Pass return-to-sport functional test at >90% (involved vs uninvolved limb)
- No return to sport for 9 months, may be directed on certain programs 6-9 months
- Display symmetry and confidence in high-speed cutting, multi-plane plyometric drills, sprinting and decelerating