

# ACL REHABILITATION PROTOCOL, OPERATIVE WITH MENISCUS REPAIR OR MICROFRACTURE

TIMETABLES ARE ESTIMATES

**Dr. Levene**  
(2/2015)

## I. Preoperative

- a. Rest, ice, compression, elevation
- b. NSAID, pref. COX-2 if early surgery planned
- c. Bledsoe style brace for concomitant gr III MCL injury if present
- d. Fit with functional brace, preop use recommended
- e. AROM to regain full mobility, call MD if mechanical block. If there is a known displaced meniscus tear, no ROM therapy, earlier operation planned
- f. Quad isometrics, straight leg raise
- g. WBAT if no locked meniscus and no gross osteochondral injury
- h. Preop formal P.T. optional but useful to speed readiness of knee for surgery

## II. First postop week, begin POD #1

- a. Rest, ice compression wrap, elevation
    - i. Dressing change ok after POD #2
    - ii. Elevation with knee in maximal extension optimal as much as tolerated (i.e. pillows under calf or heel, not knee crease)
  - b. Ankle AROM as much as possible
  - c. Quad isometrics with knee in full passive extension
  - d. Straight leg raise ok when able to do so without extension lag
  - e. Gastroc isometrics
  - f. Patellar mobilization as soon as pain permits
  - g. Supine heel slides with terminal stretch to increase flexion to full, avoid end range passive stretching in flexion
  - h. Sit and allow knee flexion over edge of table to facilitate flexion to 90°
  - i. Supine knee passive extension with wedge under heel to promote full hyperextension
  - j. Gait training with brace (locked in full extension X one week)
  - k. Must sleep in brace
- \* **Weight bearing status per Dr. Levenes' instructions, toe touch WB with crutches unless otherwise specified**

## III. Second through fourth postop weeks

- a. Same as first week, primary emphasis on increasing ROM (full hyperextension, flexion to at least 120°)
- b. Continue crutches and brace
- c. Add supine SLR out of brace when able to do so with no extensor lag
- d. Side lying SLR begins
- e. May sleep without brace as tolerated
- f. Continue toetouch weight bearing unless otherwise directed

## IV. Weeks five through six

- a. Progress ROM to full, including flexion

- b. Rehab brace open 0 to 90°, may wean from nighttime brace use as tolerated. Transition to functional knee brace at 4-6 weeks postop when swelling permits
- c. More aggressive patellar mobilization
- d. May begin stationary cycle, no resistance
- e. Progress to full WBAT for meniscus repair; remain TDWB for microfracture for 2 more weeks

#### **V. Weeks seven through twelve**

- a. Continue aggressive terminal stretching, should be full AROM early in this time frame
- b. Begin treadmill, add incline progressively up to 7-10°, backwards treadmill ok
- c. Gradually increase resistance and endurance on stationary cycle
- d. Light sport cord or theraband resisted closed kinetic chain resistance training
- e. May transition to high rep, low resistance weight training after 2 full months postop, if motion full. No open chain knee extension, no flexion greater than 90° during strength exercises
- f. Quarter squats ok, no knee flexion angle greater than 90°
- g. Continue functional knee brace full time except sleep
- h. Begin stork stands for proprioception

#### **VI. Weeks twelve through sixteen**

- a. As above for stretching
- b. Increases resistance training, closed chain. Lunges, leg press, calf press, mini-squats, HS curls
- c. Sport cord resisted forward, backward, and lateral movement
- d. May cycle outside without brace (road only, must remain seated in saddle)
- e. Light jogging in brace on soft surfaces
- f. Add slide board and advanced proprioceptive training
- g. No brace needed except for workouts or hazardous environment
- h. May begin golfing in brace (chip and putt)
- i. Increase intensity and duration of cardio training
- j. Stair stepper, precor, cardioglide ok

#### **VII. Weeks seventeen through twenty-four**

- a. Add plyometrics
- b. Hill training with jogging and bicycle
- c. Figure 8 runs, controlled intro to cutting maneuvers and sport specific activities in noncontact, noncompetitive environment
- d. Advanced strength, proprio and cardiovascular conditioning

#### **VIII. Return to sport criteria**

- a. MD clearance
- b. Sports test 20/21 or better
- c. Single leg hop equal to contralateral
- d. Adequate stability on ligament testing
- e. No significant effusions or mechanical symptoms
- f. Completed sport-specific functional progression
- g. Functional knee brace for contact sports, jumping and landing or cutting and twisting until 1 year postop, then D/C

