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