

ACL REHABILITATION PROTOCOL
(without microfracture or meniscus repair; timetables are estimates)
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PREOPERATIVE

- Rest, ice, compression, elevation
- NSAID, preferably COX-2 if early surgery planned
- Fit with functional brace (CTi2), preop use recommended
- AROM (active range of motion) to regain full mobility, call MD if mechanical block
- Quad isometrics; Straight Leg Raises (SLR)
- WBAT (weight bear as tolerated) if no locked meniscus, and no gross osteochondral injury
- Preop formal physical therapy optional but useful to speed readiness of knee for surgery
- Knee ready for surgery when range of motion (ROM) near full, minimal swelling and heat. Extension must be full preop unless locked meniscus

FIRST POSTOP WEEK, BEGINNING POD (post op day) #1

- Rest, ice, compression wrap, elevation
 - Dressing change on or after POD #2
 - Elevation with knee in maximal extension optimal as much as tolerated (i.e. pillows under calf or heel, not knee crease)
- Ankle AROM as much as possible
- Quad isometrics with knee in full passive extension
- Straight leg raise (SLR) OK when able to do so without extensor lag
- Gastroc and hip girdle isometrics
- Patellar mobilization as soon as pain permits
- Active and passive range of motion to tolerance in a non weight bearing position
- Sit and allow knee flexion over edge of table to facilitate flexion to 90°
- Supine knee passive extension with wedge under heel to promote full hyperextension
- Gait training, weight bearing as tolerated with crutches for one week and then progress off crutches as tolerated and as quad control is attained. Lock brace at 0° for ambulation until adequate quad control (usually one week)
- Must sleep in brace
- If hamstring graft, no resisted hamstring exercises until 6 weeks post op, including isometrics

SECOND THROUGH FOURTH POST OP WEEKS

- Same as first week, primary emphasis on increasing ROM (range of motion), full hyperextension, flexion as tolerated
- Wean off crutches unless specified otherwise
- Add supine SLR out of brace when able to do so with no extensor lag
- Side lying SLR begins
- Sleeping in brace optional
- Add stationary bike without resistance as ROM is attained
- Open the brace to allow ROM that equals patient's AROM (prior to warm up) unless otherwise specified

WEEKS FIVE THROUGH SIX

- Progress ROM to full, including flexion
- More aggressive patellar mobilization
- May stationary cycle, light resistance, 60 RPM
- Progress to full WBAT
- Transition to functional knee brace when swelling permits
- Begin Stork stands for proprioception when Quad function is adequate

WEEKS SEVEN THROUGH TWELVE

- Continue aggressive terminal stretching, should be full AROM early in this time frame, or may require manipulation under anesthesia
- Begin treadmill, add incline progressively up to 7-10 degrees, backwards treadmill ok
- Gradually increase resistance and endurance on stationary bike
- Light sport cord or theraband resisted closed kinetic chain resistance training
- May cycle outside in brace (road only, must remain seated in saddle) at 10 weeks post op. No clipless pedals
- Add slide board and advanced proprioceptive training
- No brace needed except for workouts, or hazardous setting (e.g. slippery or rough surfaces)
- May begin golfing in brace (chip and putt only)
- Increase intensity and duration of cardio training
- Stair-stepper, precor, cardioglide ok

WEEKS TWELVE THROUGH SIXTEEN

- As above for stretching
- Increases resistance training, closed-chain. Lunges, leg press, calf press, mini-squats, hamstring curls
- Sport cord resisted forward, backward and lateral movement
- Light jogging in brace ok at 3 months postop
- Add slide board and advanced proprioceptive training
- No brace needed except for workouts or hazardous setting (slippery or rough surfaces)
- May begin golfing in brace (chip and putt)
- Increase intensity and duration of cardiovascular training
- Stair stepper, precor, cardioglide ok
- Jump Program @ week 16

WEEKS SEVENTEEN THROUGH TWENTY-FOUR

- Add plyometrics
- Hill training with jogging and bicycle
- Figure 8 runs, controlled intro to cutting maneuvers and sport specific activities in non-contact, noncompetitive environment
- Advanced strength, proprio and cardiovascular conditioning

RETURN TO SPORT CRITERIA

MD CLEARANCE

SPORTS TEST 20/21 OR BETTER

SINGLE LEG HOP EQUAL TO CONTRA-LATERAL LEG

ADEQUATE STABILITY ON LIGAMENT TESTING

NO SIGNIFICANT EFFUSIONS OR MECHANICAL SYMPTOMS

COMPLETED SPORT-SPECIFIC FUNCTIONAL PROGRESSION

FUNCTIONAL KNEE BRACE FOR CONTACT SPORTS, JUMPING AND

LANDING, OR CUTTING AND TWISTING UNTIL 1 YEAR POSTOP, THEN

D/C BRACE

Updated May 2016 per Levene