Anterior Cruciate Ligament Reconstruction
Bone Patellar Tendon Bone Graft
Operative Rehabilitative Protocol

Week 1
- Gauze and dressing removed in PT: replace ace or use Jobst stocking
- Modalities including electrical stimulation for 20 minutes, biofeedback, and cryoboot
- Cryotherapy with ice, polar care, or cryocuff
- Patellar glides/mobilization
- WBAT with brace locked in extension and crutches
  - May unlock brace for passive ROM
  - Closed chain ROM
  - Goal 0-90 degrees
- Straight leg raises in all 4 planes progressing with ankle weights
  - Work on isolated control of quad if no extensor lag with SLR
- Prone extension stretch; goal extension symmetric to opposite side
- Start stationary bike, half revolutions forward and backward with progression to full revolutions
- Can start light exercises such as mini-dips, wall sits, step-ups, toe raises, 4-way tubing, stork stands, etc.
- Start treadmill for gait training if good control of quads without crutches

Week 1-2
- Suture removal and wound check; continue ace wrap for residual swelling; may shower
- Open brace as flexion allows; extension should be full; should be WBAT
- Continue previous weeks exercises, bicycling, and treadmill (forward and backward)
- Add Total Gym, hamstring curls, leg press, lunges (knee not to pass foot), stool walk, stork stands, Stairmaster, elliptical machine, row machine, TKE (closed chain)
- Home exercises: SLR’s, calf pumps, 4-way tubing, calf and hamstrings stretches, cryotherapy

Week 2-3
- May discontinue wrap if swelling allows
- Brace open during gait 1-120 degrees if quad control allows
- Continue exercises in previous weeks, including home exercises
- Begin squats, hack squats, versa climber, resisted walking, slide board, total gym hops (low level)
- Modalities continued: electrical stimulation, cryoboot, standing TKE’s with theraband behind knee.

Week 3-4
- Assess possibility of removing brace; ROM at least 1-120 degrees
- Continue exercises in previous weeks, including home exercises
- Forward and backward walking with change in direction
- Start shuffles, Carioca, and double leg hops
- More intense proprioceptive training
- Modalities stopped if appropriate
Week 4-6
- Discontinue brace and push for full ROM
- Continue exercises in previous weeks with increased intensity, including home exercises
- Add jump rope, single leg hopping, and resisted lunges
- Increase speed of exercises **safely**

Week 6-16
- Patient to be fitted for functional brace and worn during physical activity
- Strength 60% of opposite limb
- Patient discharged from therapy and released to home program
- Begin jogging between 9 and 12 weeks depending on doctor’s discretion
- Continue jumping rope and using ice after each workout

Week 16-20
- Continue brace
- Workouts three times per week
- Begin to perform lazy Z’s gradually picking up pace
- Jump stops should be about 50-70% of maximum speed at 5 months
- Continue to jog, begin sprinting, and continue strengthening program

Week 20-24
- Continue brace
- Functional testing to be completed including one-leg hop for time, one-leg hop for distance, and 4 corner speed drill
- Should continue working out while regaining full speed
- Return to full activity, work, or sport

Criteria for return to sport activities
- One-leg hop 90% of opposite leg
- Jog without limp
- Full-speed without a limp
- Shuttle run without a limp
- Figure 8 running without a limp
- Single leg vertical jump 90% of opposite limb
- Squat and rise from squat