

ACL Postop Protocol

Core Rehabilitation Guidelines

- You must achieve full extension (i.e. *keeping your leg straight*).
 - For the first 2 weeks, you must sleep with the brace on and you must wear the brace at all times when you are up and moving. You are not to alter the buttons on the brace, as your leg needs to be fully straight when you are asleep and moving.
- You must achieve 90° flexion within the first 48 hours (i.e. *restore your motion*)
 - Starting on the day of surgery when you are seated, comfortable, and in a safe environment, please remove the brace and start bending the knee immediately.
 - Any time and every time you are seated, Dr. Ramkumar needs you to remove the brace and work on motion as long and as often as it takes to achieve 90° flexion.
- Aggressive patellar mobilization during first 6 weeks (i.e. *manually break up scar tissue*)
 - Starting a 4-5 days after surgery, you must manually break up scar tissue by moving, mobilizing, and jiggling your kneecap. You can compare your surgical kneecap to your other knee assess your progress. Do not touch the incision directly, so you will need to do this through the dressings where possible. You can be more aggressive with this after the first postoperative visit once your wound is confirmed to be healing nicely.
- Weight bearing fully by 2 weeks (i.e. *gradually place full weight by the 2nd week*)
 - During the first week, please use crutches and limit your weight bearing. This is considered “toe touch weight bearing.” This will give your muscles/tendons time to heal and your knee joint time to clear the fluid Dr. Ramkumar added to perform the operation.
 - During the second week, progress to putting full weight on the leg. This is considered “weight bearing as tolerated.” By two weeks, you should be fully weight bearing. This is regardless of meniscal work performed concomitantly.
- Gait normalization by 4 weeks without assist devices
- Full range of motion by 6 weeks

Specific Timeline: 0-2 Weeks

- **Emphasize**
 - Patella mobility
 - Full knee extension
 - Improving quadriceps contraction
 - Controlling pain/effusion
- GOALS:
 - ROM:
 - Full passive extension
 - **Minimum** of 90° knee flexion
 - Normalize patella mobility
 - Weightbearing:
 - Progressive weight bearing to full weight by week 2
 - Control post-operative pain / swelling

- Prevent quadriceps inhibition
- Promote independence in home therapeutic exercise program
- BRACE INSTRUCTIONS:
 - Ambulate with brace locked in extension
 - Unlock hinged brace to 90° knee flexion by 2 weeks post op if there was meniscal repair work (including root repairs). If there was no meniscal work or only a meniscectomy, the brace can be fully discontinued.
- PRECAUTIONS:
 - Avoid heat application
 - Avoid prolonged standing/walking
- TREATMENT RECOMMENDATIONS:
 - Towel under heel for knee extension, A/AAROM for knee flexion, patella mobilization, quadriceps re-education (NMES and /or EMG), hip progressive resisted exercises, proprioception training, short crank bike, bilateral leg press (5 – 70°), SLR all planes (with brace locked to without brace), cryotherapy for pain and edema
 - Emphasize patient compliance to HEP and weight bearing precautions/progression
- MINIMUM CRITERIA FOR ADVANCEMENT TO NEXT PHASE:
 - Able to SLR without quadriceps lag
 - 0° knee extension, minimum of 90° knee flexion
 - Able to demonstrate unilateral (involved extremity) weight bearing without pain

Specific Timeline: 2-6 Weeks

- GOALS:
 - ROM 0° - 125°, progressing to full ROM
 - Good patella mobility
 - Minimal swelling
 - Restore normal gait (non-antalgic) without assistive device
 - Ascend 8” stairs with good control, without pain
- BRACE INSTRUCTIONS:
 - During weeks 2-4, unlock the hinged brace to 90° knee flexion
 - Discontinue the brace after 4 weeks (regardless of meniscal work, including root repairs)
- TREATMENT RECOMMENDATIONS:
 - Continue phase I exercises as appropriate
 - Advance AAROM knee flexion/extension exercises (emphasize full passive extension), hamstring/calf, flexibility, progress to standard bike, leg press (80 – 0° arc), mini squats, active knee extension to 40°, proprioceptive training, forward step up program, underwater treadmill (incision benign)
 - Progress WB and DC crutches as quadriceps strength improves
 - Progress/advance patients home exercise program (evaluation based)
- PRECAUTIONS:
 - Avoid descending stairs reciprocally until adequate quadriceps control & lower extremity alignment

- Avoid pain with therapeutic exercise & functional activities
- MINIMUM CRITERIA FOR ADVANCEMENT:
 - ROM 0-125°
 - Normal gait pattern
 - Demonstrate ability to ascend 8” step
 - Good patella mobility
 - Functional progression pending functional assessment

Specific Timeline: 6-14 Weeks

- GOALS:
 - Restore Full ROM
 - Able to descend 8” stairs with good leg control & no pain
 - Improve ADL endurance
 - Improve lower extremity flexibility
 - Protect patellofemoral joint
- TREATMENT RECOMMENDATIONS:
 - Progress squat/leg press program, initiate step down program, advance proprioceptive training, agility exercises, retrograde treadmill ambulation/running, quadriceps stretching
 - Emphasize patient compliance to both home and gym exercise program
- PRECAUTIONS:
 - Avoid pain with therapeutic exercise & functional activities
 - Avoid running and sport activity till adequate strength development and MD clearance
- MINIMUM CRITERIA FOR ADVANCEMENT:
 - ROM to WNL
 - Ability to descend 8” stairs with good leg control without pain
 - Functional progression pending functional assessment
 - Emphasize
 - Improving quadriceps strength
 - Eccentric quadriceps control
 - Normalizing knee ROM and patella mobility
 - Minimizing knee effusion
 - Normal gait pattern

Specific Timeline: 14-22 Weeks

- GOALS:
 - Demonstrate ability to run pain free
 - Maximize strength and flexibility as to meet demands of ADLS
 - Hop Test > 75% limb symmetry
- TREATMENT RECOMMENDATIONS:
 - Start forward running (treadmill) program when 8” step down satisfactory
 - Advance agility program / sport specific
 - Start plyometric program when strength base sufficient
- PRECAUTIONS:

- Avoid pain with therapeutic exercise & functional activities
- Avoid sport activity till adequate strength development and MD clearance
- CRITERIA FOR ADVANCEMENT:
 - Symptom-free running
 - Hop Test > 75% limb symmetry
 - Functional progression pending & functional assessment

Specific Timeline: 22-36 Weeks

- GOALS:
 - Lack of apprehension with sport specific movements
 - Maximize strength and flexibility as to meet demands of individual's sport activity
 - Quadricep LSI > 90% limb symmetry
- TREATMENT RECOMMENDATIONS:
 - Continue to advance LE strengthening, flexibility & agility programs
 - Advance plyometric program
- PRECAUTIONS:
 - Avoid pain with therapeutic exercise & functional activities
 - Avoid sport activity till adequate strength development and MD clearance
- CRITERIA FOR DISCHARGE:
 - Quadricep LSI > 90% limb symmetry
 - Lack of apprehension with sport specific movements
 - Flexibility to accepted levels of sport performance
 - Independence with gym program for maintenance and progression of therapeutic exercise program at discharge