

Postoperative Rehabilitation Protocol for ACL Reconstruction



Dr. MacLean

Physical therapy should be started within a few days after surgery

Phase 1: Postoperative weeks 0-4

GOALS

- Protect graft
- Minimize pain/swelling

BRACE/CRUTCHES

- Wear knee immobilizer until nerve block wears off, then no immobilizer is needed
- Weight bearing as tolerated using crutches
- Wean from crutches as tolerated

RANGE OF MOTION

- 0-120 degrees as tolerated; ensure achievement of full extension
- Work on restoring normal gait

STRENGTHENING

- Ankle pumps
- Work on quadriceps control (quad sets, heels slides, SLR)
- For patellar or quadriceps tendon autograft – hamstring curls adding weight as tolerated, closed kinetic chain quadriceps strengthening as tolerated (wall sit, step ups, mini squats, leg press 90-30 degrees)

MODALITIES PRN

Phase 2: Postoperative weeks 4-10

GOALS

- Restore normal gait
- Maintain full extension, progress to full flexion
- Protect graft

- Increase hip, quadriceps, hamstring, and calf strength
- Increase proprioception

RANGE OF MOTION

- Continue progressing in range of motion / flexibility to full knee flexion.
- Maintain full extension
- Work on restoring normal gait
- Continue hamstring, gastroc/soleus stretches

STRENGTHENING

- Closed kinetic chains strengthening: One-leg squats, leg press, step ups at increased height, partial lunges, deeper wall sits, lunge walks
- Stairmaster – begin with short steps, avoid hyperextension
- Nordic Trac or elliptical machine for conditioning
- Stationary bike – progress time and resistance as tolerated
- Continue to progress proprioceptive activities: ball toss, balance beam, mini-trampoline balance
- Continue to progress hip, hamstring, and calf strengthening as tolerated
- If available, begin running in pool (waist deep) or an unweighted treadmill at 8 weeks

Phase 3: Postoperative weeks 10-16

GOALS

- Full ROM
- Improve strength, endurance, and proprioception of lower extremity
- Protect patellofemoral joint
- Normal running mechanics/gait
- Strength approximately 70% of the uninvolved lower extremity (using isokinetic evaluation if available)

If you have any problems or questions, please call your doctor's office (8am-5pm).

Answering service for after hours.

667 KINGSBOROUGH SQ, STE 300
CHESAPEAKE, VA 23320
P 757.422.8476 | F 757.425.8476
ORTHOVIRGINIA.COM

RANGE OF MOTION

- Continue ROM exercises to maintain full active ROM

STRENGTHENING

- Initiate open chain kinetic extensions 90-30 degrees, progress to eccentrics
- Begin swimming if desired
- If available, isokinetics (with anti-shear device) – begin with mid-range speeds (120 degrees / sec to 240 degrees / sec)
- Progress toward FWB running at 12 weeks
- Progressive hip, quadriceps, hamstring, and calf strengthening
- Advance proprioceptive activities to initiate agility activities
- Recommend isokinetic test with anti-shear device at 12 weeks (used to guide continued strengthening)

Phase 4: Postoperative months 4-6

GOALS

- Symmetric performance of basic and sport specific agility drills
- Single hop and 3 hop tests 85% of uninvolved lower extremity
- Quadriceps and hamstring strength at least 85% of uninvolved lower extremity per isokinetic strength test

RANGE OF MOTION

- Maintain full ROM

STRENGTHENING

- Continue and progress flexibility and strengthening program based on individual needs and deficits
- Initiate plyometric program as appropriate for patient's goals

- Agility progressing including, but not limited to: Side steps, crossovers, figure 8 running, shuttle running, one-leg & two-leg jumping, cutting, acceleration/deceleration sprints, agility ladders drills, sport-specific drills as appropriate for patient
- Assessment of running on treadmill for proper running mechanics
- Continue progression of running distance based on patient needs

Phase 5: Postoperative 6 months and beyond

GOALS

- Single hop and 3 hop tests at least 85% of uninvolved lower extremity
- Quadriceps and hamstring strength at least 85% of uninvolved lower extremity per isokinetic strength test
- Safe return to athletics/work
- Maintenance of strength, endurance, proprioception
- Educate patient with regards to any possible limitations

RANGE OF MOTION

- Maintain full ROM

STRENGTHENING

- Maintenance program for strength and endurance with gradual return to sports participation/work
- **All patients should consult with their operative surgeon on specific return to work/return to play release**