



ACL Reconstruction Rehabilitation Protocol for Physical Therapy

Phase I, *The Motion Phase (0-6 Weeks):*

The focus of therapy for the first 2 weeks is focus on extension! Patients should be working on isometric quadriceps contraction immediately. This can quickly be transitioned into concomitant straight leg raises. When patients have regained their full extensions and can perform 20 straight leg raises without extensor lag, the brace can be unlocked for ambulation and eventually discontinued. Flexion can also start right away with no restriction. (If medial meniscal repair has been performed, flexion should be held to 90 degrees for 4 weeks.)

Goals:

- Protect the reconstruction
- Ensure wound healing
- Decrease swelling in the knee and leg
- Restore full extension / hyperextension (terminal knee extension standing closed chain with theraband)
- Restore full flexion
- Promote quadriceps strength and eliminate any extensor lag
- Increase tolerance for weightbearing
- Minimize deviations of gait mechanics for non-antalgic gait
- Pain free stair climbing

When I see patients back at 6 weeks, I look for full range of motion with no swelling, no pain, no limp. They should be walking down my hallway with it difficult to tell the operative from the non-operative knee.

Phase II, *The Strength Phase (6-12 Weeks):*

The focus of therapy starting the 6th week is strength. Certainly if patients have not regained full motion, this would take priority. Patients can start:

Hamstring and quad PRE's. By week 8 or 9 advance weights as tolerated

Lateral steps

Increased proprioception training

Trampoline static exercise

SLS with rebounder throwing/catching

Stairmaster and Elliptical

By week 9, emphasize eccentric quad control for strength and endurance, can start closed chain lunges

Phase III, *The Functional Phase* (Starting at 12 Weeks):

Lower extremity open chain weight machines (start with low weight, high reps)

Hamstring curls and leg extensions

Straight ahead jogging on a treadmill

Progress proprioception skills with BOSU ball

Initiate Plyometrics including trampoline bobbing, bouncing, jumping, heavier leg press

Goals of Phase III include good quad strength with VMO:VL / 1:1 ratio. Patients should have proprioception skills in order to control dynamic activities without loss of balance. Patients should be able to do a functional squat and return pain free while exhibiting proper quad control. Patients should be able to jog with symmetrical strides and proper propulsion bilaterally.

Phase IV, *Return to Sport* (16+ Weeks):

Initiate plyometrics including trampoline bobbing, bouncing, jumping

Moderate to heavy weight training / leg press

Agility drills

Sport – Specific drills

Goals of Phase IV include excellent control of dynamic activities without loss of balance. Agility drills and sport-specific activities performed with control and symmetry.

At 22-24 months postop, if patients have reached all above goals, functional hop testing is performed. If average score of involved lower extremity is 85% of uninvolved, will typically clear back to sports.