

REHABILITATION GUIDELINES

ACL RECONSTRUCTION WITH MENISCAL REPAIR

Mark A. Bergin, MD

St Clair Orthopaedics & Sports Medicine
(586) 773-1300

The intent of this protocol is to provide the physical therapist with guidelines of the post-operative rehabilitation course after an ACL reconstruction with meniscal repair. It should not be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their physical exam findings, individual progress, and/or the presence of post-operative complications. The physical therapist should consult the referring physician with any questions or concerns.

INDIVIDUAL CONSIDERATIONS:

PHASE I (0-4 weeks)

Goals

- Control inflammation and pain
- Full active extension and 90 degrees of flexion
- Achieve quadriceps control

Brace

- Locked in extension while walking until quad control for ACL reconstruction (usually 4-6 weeks)
- Unlocked (0-90 degrees) after 1 week when sitting/ROM exercises
- Sleep with brace locked for 3 weeks, then discontinue for sleep

Weight-Bearing Status

- Weight bear as tolerated with brace locked in extension and crutches unless otherwise noted
- Crutches/brace can be discontinued when good quadriceps control and a normal gait is achieved (usually 4-6 weeks)

Restrictions

- No Running, Jumping, Squatting, Kneeling, or Pivoting

Therapeutic Exercises

- Straight leg raises in all planes (use brace locked in extension initially until quad strength is good enough to prevent an extension lag)
- Heel slides to <90 degrees of flexion, calf pumps, quadriceps sets
- Electrical stimulation
- Patellar mobilization
- Week 4+: Stationary bike (seat high, low tension)

PHASE II (5- 8 weeks)

Criteria to advance from Phase I→II

- Good quad set, straight leg raise without extension lag
- 90 degrees of knee flexion
- Full extension

Goals

- Progress weight-bearing
- Restore full range of motion after 6 weeks post-op

Brace/Weight-bearing status

- Full weight bearing and discontinue brace as soon as normal gait pattern/quad control is achieved

Restrictions

- No Running, Jumping, Twisting, Kneeling, Pivoting, or Squatting>45°

Therapeutic Exercises

- Mini-squats (0-45 degrees)
- Stationary Bike (high seat, low tension)
- Prone leg hangs with ankle weights until extension is achieved
- Closed chain extension (leg press:0-45 degrees)
- Pool walking/jogging
- Toe raises
- Hamstring and gastroc/soleus stretches
- StairMaster
- *Proprioception*
 - Mini-tramp standing
 - Unstable platform (BAPS) with eyes open and closed
 - Standing ball throwing and catching

PHASE III (8-20 weeks)

Criteria to advance from Phase II→III

- Normal gait
- Full range of motion (avoid hyperflexion loading)
- Limit flexion to 120 degrees for 3 months post op
- Sufficient strength and proprioception to initiate functional activities

Goals

- Improve confidence in the knee
- Avoid overstressing the graft
- Protect the patellofemoral joint
- Progress with strength, power, and proprioception

Restrictions

- No Jumping, Twisting, Kneeling, Pivoting, or Squatting>90°

Therapeutic Exercise

- Continue with flexibility exercises
- Advance closed chain kinetic strengthening (one-leg squats, leg press 0-60 degrees)
- StairMaster, elliptical trainer, cross-country ski machine
- Plyometrics
 - Stair jogging
 - Box jumps (6 to 12-inch heights)
- Proprioception
 - Mini-tramp bouncing
 - Lateral slide board
 - Ball throwing and catching on unstable surface
- Functional Training (12+ weeks)
 - Straight ahead jogging
- Agility (16+ weeks)
 - Start at slow speed
 - Shuttle run, lateral slides, Carioca cross-overs
 - Plyometrics
 - Stair running
 - Box jumps (1-2 foot heights)

PHASE IV (5 months+)

Criteria to advance from Phase III→IV

- Full, pain-free range of motion
- No patellofemoral irritation
- Sufficient strength and proprioception to progress to recreational activities

Goals

- Return to athletic activity by 6 months

Restrictions

- Avoid hyper-flexion and squatting >90° until 6 months post-op

Therapeutic Exercises

- Progress with flexibility and strengthening program
- Plyometrics for speed and power
- Continue running
- Incorporate cutting drills into agility training
- Advance heights with plyometric conditioning
- Sports specific drills (start a 25% on speed and advance as tolerated)

Criteria for Return to Sports

- Full range of motion
- No effusion
- Quadriceps strength 85% of contralateral side
- Hamstring strength 100% of contralateral side
- Clearance from doctor prior to return to sport