



Chris Miller, MD
PRMC Bone and Joint
620.672.1002

PHYSICAL THERAPY PROTOCOL FOR ACL RECONSTRUCTION HAMSTRING GRAFT

THIS PROTOCOL IS PROVIDED FOR GENERAL GUIDELINES AND RECOMMENDATIONS. ALL PHYSICIAN ORDERS SUPERCEDED THIS PROTOCOL. IT IS ADVISED THAT THERPAIST USE CLINICAL JUDGEMENT AND DISCRETION IN ADVANCING PATIENTS THROUGH THE PROTOCOL.

PHASE 1 – IMMEDIATE POST-OPERATIVE PHASE (WEEKS 0-2)

Goals:

1. Knee flexion 0-90 degrees
2. Quadricep activation and strengthening
3. Control post op pain and swelling
4. Emphasis on full knee extension

Post-Op Day 1: Physical therapy evaluation

1. Leave dressing and brace intact
2. Pull drain if present
3. Start therapeutic exercise for ankle ROM, knee extension, quad activation and leg raises

Post-Op Day 3-4: Remove Dressing. Place band aids over incisions if needed, otherwise leave open to air

Weight Bearing – Weight bearing as tolerated unless otherwise ordered by physician. Use axillary crutches until patient can ambulate with a normal gait.

****ACL with Meniscal Repair:** TTWB for 4 weeks unless otherwise ordered by physician, then progress to FWB by 6 weeks.

Knee Immobilizer – Post op: Locked in full extension until dressing change. After dressing is remove brace may be opened as knee ROM allows. May remove knee brace with ambulation once patient has functional quad tone and is safe to ambulate without it.

Wear at nighttime for 1 week.



Therapeutic Exercise:

Ankle Pumps

Passive knee extension to 0 degrees

Patella mobilizations

Straight leg raises hip flexion and abduction (Knee brace on at home locked in full extension until good quad tone. Once adequate quad strength then may remove knee brace with leg raises)

Quad Sets

Weight shifts and standing weightbearing exercises on surgical leg with immobilizer locked in extension until good quad tone.

Heel slides 0-90 degrees

Modalities:

Cryotherapy/Ice packs with elevation for swelling and pain management

NMES to assist quadricep's activation if needed

Electrical stimulation/IFC for pain control and swelling if needed

PHASE 2 – MAXIMUM PROTECTION PHASE (WEEKS 2-6)

Goals:

1. Protect the healing graft
2. Restore normal gait
3. Knee ROM 0-130 Degrees
 - a. For ACL with meniscal Repair 0-90 Degrees through week 4 then increase to 130 degrees by week 6
4. Improve Quad tone and strength
5. Minimize swelling

Therapeutic Exercise:

Continue previous exercises

Continue to emphasize full knee extension and progress knee flexion ROM

Nu-step (recumbent stepper) for ROM and endurance

Stationary bike for ROM and endurance

Straight leg raises adding hip extension and adduction

Gentle non weight bearing calf and hamstring stretches at 2 weeks

Calf strengthening

Progressive weight bearing exercises including progressive mini/wall squats



Progressive hip strengthening exercises
Proprioception exercises
Step activities including forward/lateral step ups progressing to step downs
Initiate eccentric quad strengthening
Leg Press (0-60 degrees)
Scar massage
Gait training as needed to normalize gait

Modalities: PRN

Cryotherapy/Ice packs with elevation for swelling and pain management
NMES to assist quadricep's activation if needed
Electrical stimulation/IFC for pain control and swelling if needed

PHASE 3 – MODERATE PROTECTION PHASE (WEEKS 6-12)

Goals:

1. Restore full knee ROM
2. Improve LE flexibility
3. Maximize strengthening for the quadriceps and lower extremity
4. Initiate hamstring curls and strengthening

Therapeutic Exercise:

Continue previous exercises as needed using therapist discretion
Increase endurance on stationary bike
Add hamstring curls and initiate hamstring strengthening
Progressive proprioception exercises
Progressive squat and lunge program
Progressive hip strengthening
Progressive eccentric quad strengthening
Initiate hip flexor and quadricep stretches
May add stair climber
Recommend therapeutic exercises for bilateral lower extremities as needed
May add pool jogging at 9 weeks if available
May add isokinetic strengthening 100-40 degrees at 9 weeks if available

PHASE 4 – LIGHT ACTIVITY PHASE (WEEKS 12-16)

Goals:

1. Maximize strength, power and endurance
2. Normal running gait
3. Prepare for return to functional activities

Therapeutic Exercise:

Continue previous exercises as needed using therapist discretion
Add resisted progressive knee extension exercises (LAQ)
Initiate jogging, running program
Initiate plyometric program
Initiate agility drills
Start progressing into sport specific training

PHASE 5 – PREPERATION TO RETURN TO ACTIVITY PHASE (WEEKS 16-36 WEEKS)

Goals:

1. Patient independence with progressive stretching, strengthening, endurance, plyometric and agility programs
2. Return to gym/school lifting programs
3. Return to sport specific training programs

Therapeutic Exercise:

Continuation of therapy will depend upon physician and therapist discretion
Continue with prior therapeutic exercises
Continue and advance all prior exercises working towards education and patient independence and return to prior lifting and training programs

RETURN TO PLAY

Return to play and sporting events when cleared by physician. Recommendation is no return to competitive sports prior to 9 months post op as research shows a significant increase in re-tear injuries in patients returning to sports prior to 9 months vs those that return after 9 months. Likewise, there is a significant decrease in the likelihood of re-tear injuries for those who wait 1 year post op to return to sports.