



ACL Repair with Hamstring Graft

Phase 1: Maximum Protection Phase (Weeks 1-4)

Goals: Control inflammation/effusion

Allow early healing of the Hamstrings

Full passive knee extension

Gradually increase knee flexion

Independent quad.control

Stage 1: Immediate post-surgery days 1-7

- Ice, compression, elevation
- Brace locked at 0 degrees for ambulation and sleeping only
 - Brace may be unlocked during sitting etc.
- ROM (Passive 0-90)
- Patellar mobilization
- Strengthening exercise:
 - Quad Sets
 - SLR flexion
 - Hip Abd/Adduction
 - Knee Extension 60-0 degrees
- Weight Bearing: 25-50% WB as tolerated with 2 crutches
- Avoid active knee flexion

Stage 2: Weeks 2-4

- Continue use of ice and compression
- Brace locked for ambulation
- ROM Guidelines
 - Gradually increase PROM
 - Week 2: 0-105 degrees
 - Week 3: 0-125 degrees
 - Week 4: 0-135 degrees
- Weight bearing guidelines-> Continue to lock brace
 - Week 2-3: 50% WB
 - Week 4: WBAT with crutches

*Discontinue crutches when safe and proper gait (usually 3-4 weeks)
- Strengthening Exercises:
 - SLR (all 4 planes)
 - Knee Extension 90-0degrees
 - Heel Slides
- Bicycle (once ROM appropriate)

*Avoid twisting, deep squatting, stooping



*Avoid hamstring curls

Phase 2: Moderate Protection Phase (5-7)

Goals: Full PROM

No Swelling/inflammation
Re-establish muscle control
Proper gait pattern

- Continue use of ice and compression
- Continue ROM and stretching to maintain 0-135 Degrees
- Progress strengthening exercises Phase I
 - Heel slides
 - Knee extension 90-0 Degrees
 - Standing hamstring curls
 - Mini- squats 0-45 degrees
- Begin Level Two agility and Level II Strengthening
 - Cup walking
 - Planks
 - Bridging
 - Steamboats 4 way (involved leg down)
 - Ball roll: for, side and back (involved leg down)
 - Heel raises
- Light strengthening: Short range leg press, 4-Way hip, leg extension 90-45, Dead lifts
- Bicycle (as ROM permits)
- Pool Program
- Discontinue Brace at 4-5 Weeks

*Avoid twisting, pivoting, running and deep squatting

Phase 3: Controlled Activity Phase (8-16)

Goals: Improve strength and endurance

Maintain Full ROM
Gradually increase applied stress

Week 8 –Week 11

- Continue all strengthening exercises listed above
- Initiate Dynamic warm-up
- Initiate Form Stepping (progress from walk pace to fast step pace)
- Initiate light resistive hamstring curls
- Initiate elliptical
- Toe calf raises
- Progress balance training



- Progress to isotonic strengthening program

Week 12 –week 15

- Continue Strengthening and stretching program
- Continue dynamic warm-up
- Form running: progress from fast pace walk to trot to jog pace
- Initiate treadmill for endurance (3.5mph fast walk then progress to light jog at 14 weeks)
- Begin step ups and step downs
- Initiate pool running

Phase 4: Return to Activity Phase (4-6 month)

Goals: Improve strength and endurance
Prepare for unrestricted activities

Criteria to Progress to Phase 4

- Full non-painful ROM
- No pain or tenderness
- Satisfactory clinical exam

Exercises

- Continue and progress all strengthening exercises and stretching drills
- Deep squatting permitted at 4 months
- Initiate jumping program Ankle jumps, two-legged hop, two –legged jumps, single leg, etc...
- Initiate straight line running at 4 months
- Initiate pivoting and cutting: 5 months
- Initiate agility training: 5 months
- Gradually return to sport drills: 6 months

- Non contact practice 7 months
- Full competition non contact sports 9 months
- Full competition full contact 10 to 12 months