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 90-0 degrees  
  - Heel Slides  
- Bicycle (once ROM appropriate)  
*Avoid twisting, deep squatting, stooping*
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 hamstring curls*

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

*Avoid twisting, pivoting, running and deep squatting*
• 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