REHAB PROTOCOL FOR ACL RECONSTRUCTION USING ALLOGRAFT

General Guidelines

- **Brace:** Locked in full extension for walking and sleeping for first week
  May allow 90 degrees flexion after first week given:
  1) Full extension
  2) Solid, isometric quad contraction
  3) SLR
  Brace will be worn for 10 weeks to protect graft, 0 to 90 degrees
- **Crutches:** Use at all times, solid, isometric quad set and SLR
- **Weight bearing:** 30 % partial weight bearing
- **Bathing:** Showers allowed after 10 days post-op. Baths allowed after sutures removed at follow up with physician 7-10 days post-op.
- **Driving:** Allowed 1 week after left leg procedures and automatic transmission. Allowed after 4-6 weeks with right leg procedures or standard transmission.
- **Healing:** Assume 16 weeks for graft revascularization

Physical Therapy

Anticipate 1 visit per week for 2 to 3 weeks' then 2 visits per week for 20 weeks. Return to sport or full workload will take at least 6 months.

Rehabilitation Progression

Progression through these phases is provided as a general guideline; actual progression will take into account the patient's motivation, cooperation, healing and function.
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**Phase I**  
0 to 6 weeks

**Goals**  
- Protect graft and fixation  
- Full active extension (compared to uninvolved knee) to 90 degrees flexion  
- Control pain and effusion  
- Tonic, sustained isometric quad contraction with SLR  
- Normal gait pattern

**Exercises:**  
- Patellar mobilization  
- Quad set  
- SLR  
- Hip adduction SLR  
- Hip extension SLR  
- Knee flexion (prone)  
- Hip abduction SLR  
- SAQ (no resistance)  
- Knee flexion (standing)  
- Shallow squat/Toe raise  
- Proprioceptive drills (with uninvolved leg): Star reaches, Foam pad, Wobble board  
- UE workouts

**Phase II**  
6 to 12 weeks

**Criteria**  
Sustained quad contraction throughout 4” lateral step down, 5 to 10 reps with good control.

**Goals**  
- Protect graft  
- Discontinue use of brace  
- Full active flexion  
- Normal gait pattern
Exercise
- PRE's:
  - Hip adduction
  - Hip abduction
  - Hip extension
  - Knee flexion
  - Squats (to 45 degrees knee flexion, loading not to exceed body weight until six weeks post op)
  - Toe raise
  - Leg press (to 90 degrees knee flexion, loading not to exceed body weight until 6 weeks post-op)
- Stairmaster
- Stationary bike
- Proprioceptive drills:
  - Star reaches, Foam pad, Mini tramp, BAPS/Wobble board
  - Step ups/Step downs
- Patellar Mobilization
- Pool exercises:
  - Running (forward and backward), Lunges, Side steps, Carioca, Jumping Jacks, Hopping, Semi squats, Toe Raises

Phase III
8 to 20 weeks

Criteria:
- Normal gait pattern
- Able to perform HS curl within 10 lbs.

Goals:
- Protect graft
- Full AROM
- Increase strength, endurance, proprioception

Exercises:
- PRE's, Aerobic and Proprioceptive drills - Continue progressions from Phase II
- Patellar mobilization

After 10 to 12 weeks with 75% strength on leg press and HS curl (1 RM), add:
- Open chain knee extension (optional) 90 degrees to 45 degrees with supervision, progress to eccentrics
- Forward lunges
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- **Running**: 25% to 50% effort to start, begin on mini-tramp ¼ mile on balls of feet, progress ¼ to ½ mile per week, straight course. Backwards running 200 yards per ¼ mile forward running.
- **Jump rope** up to 20 minutes, varying footwork.
- **Progress to agility drills**: Side steps, Cariocas, Figure 8's (20 yards---10 yards), Shuttle runs (alternating front leg for touch downs), Unilateral hops (multi-directional), Lateral slides.

**Phase IV**

20 plus weeks

**Criteria:**

- Necessary strength, balance and endurance for return to sport or work
- 80% to 100% strengths on leg press, HS curl and knee extension (1 RM)
- Physician clearance

**Goals:**

- Safe return to pre-injury activities
- Assume independent continued exercise program

**Exercises:**

- Sport/Work specific drills
- Resistance running
- Plyometrics