ACL Reconstruction
Rehabilitation Protocol
Dr. Carson (Revised 3/22/2018)

ATTENTION PHYSICAL THERAPISTS—STRESS IMPORTANCE OF THE FOLLOWING:

- Place patient in brown compression stocking (20-30 mmHg) at first PT appointment. Wear during daytime only and d/c at night—instruct patient/family member how to don/doff stocking
  - May discharge when no swelling or effusion—typically 3-4 weeks p/o
- Stress early knee extension. Should reach full knee ext by 2 weeks post-op.
- Stress no pillows under popliteal fossa. Always under calf/heel only to progress knee extension.
- All multi-ligament reconstructions on ASA 325 p/o daily X2 weeks unless contraindicated (i.e. Coumadin, Bloodthinners, Allergies)

Phase 1 (2-4 weeks)  Pgs. 6-10

- D/C crutches 1-7 days
- Work on active and passive range of motion. Full range of motion unless meniscal repair then 0-90 degrees for 4 weeks. Please note, if meniscal root repair, no flexion past 90 deg for 6 weeks.
  - Normal gait with brace on
- Unlock brace 3-14 days
  - good quad set
  - Within 2 degrees of full Ext
  - Wt. bearing control (SLS 5 sec no brace)
  - Dbl mini squat with equal wt. distribution through 30 degrees of flex
- Remove brace 1-4 weeks
  - Normal gait with good quad control
  - Wt. bearing control (SLS 10 sec no brace)
  - No apprehension without brace during walking
  - Progressively work out of brace

GOALS

- Eliminate Swelling
- ROM
  - Full Active Ext
    - No prone hangs with additional weight with hamstring graft
  - At least 125 degrees of Flex
  - Patellar Mobs
  - Scar mobilization 4-6 weeks when adequate healing
• Muscle Activation
  o Restore weight bearing leg stability
  o Restore ability to lift leg in all directions actively
    • *No hamstring sets with hamstring graft until six (6) weeks, then gradually progress hamstring strengthening as tolerated.*
• Core Body Training
• Ambulation
  o Normalize gait pattern with use of crutches and/or brace

Phase II ( Begins 2-6 weeks post surgery, goals attained in approx. 3-5 weeks) Pgs. 11-15
• ROM
  o Achieve full active knee ROM (equal to uninvolved side)
  o Start stretching program for: Hamstrings, IT Band, Gastroc/Soleus, Hip flexors/Quads
• Gait Drills
  o Performed with slow and controlled motions
• Functional Strengthening
  o Squat, Box steps (back), Stationary lunge
• Balance
  o Increase balance and proprioception in all planes, Progress static to dynamic movement
  o SLS progression
• Core Body
  o Core progression
  o Start Cardio without Ant. Knee pain
  o Start UE strengthening, occupation or sport will determine this section

Phase III ( Begins 6-8 wks. post surgery, attain goals in phase II prior to beginning) Pgs. 16-21
• ROM
  o Full active ROM is Expected
  o Dynamic Agility Drills
    o Develop dynamic flexibility to allow proper alignment during activities of increased speed
    o Progress stride length and velocity as movement control improves
    o Ex: Fwd, Bwd, Side skip, side shuffle, Carioca, start stop, back pedal acceleration, stationary fast feet, tall-fall-run
    o Slide board at 10 weeks
    o Plyosled at 12 weeks with and without meniscal repair
• Functional Strengthening
  o Progress single plane to multi-plane exercises and functional exercises
  o Prior to progression patient must display good alignment and control of multiplanar movements
  o Develop eccentric muscle control
• **Landing and Takeoff Drills (Not until 16 weeks)**
  o Step off 6-10 in. box with Dbl leg land into squat position. When performed consistently, correctly and without pain can progress to single leg landing
• **Exercises:** Step offs, bounce jumps, leap and land, jump stops.
• **Balance**
  o Emphasize balance with postural control and duration in addition to multi-plane movements
• **Core Body**
  o Advance core strengthening
  o Design individualized Cardio and UE strengthening to individuals work/sport

**Phase IV** (Begins 12-16 weeks post surgery) Pages 22-24
* Address confidence in dynamic movements

• **Dynamic Warm up** (5-15 minutes)
  o Same drills as phase III but with larger size and speed of movement
• **Multi-planar Landing Control and Neuromuscular Reaction**
  o Progress from Dbl leg to Single leg impact control *Not prior to 8 wks*
  o Progress to cutting and pivoting *(not prior to 8 wks, or completion of Dbl leg progression)*
  o Progress to Jump Program dependent upon strength and physician release
• **Functional Movements and Strengthening**
  o Progress to single leg and multi-planar movements with rotation
• **Advanced Core Strengthening**
  o Progress to include progression of force from upper to lower body and vice versa, as well as, movements of extremities during stabilization

**Phase V** Sports Performance and Injury Prevention Pg 24
• Patient specific exercises for their sport/work demands. This phase is optional
ACL reconstruction—jogging on treadmill starting at **16 weeks** (if strength adequate) and not until **16 weeks** with ACL and Meniscal repair. Progress to running on flat track approximately **16 -20 weeks**.

ACL **16-20** weeks begin plyometric training.

Strength within 10% of uninvolved before return to sport.

These guidelines are even for the super motivated patient.