

**ACL Reconstruction
Rehabilitation Protocol
Dr. Aukerman (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 6 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**
 - Restore weight bearing leg stability
 - 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**
 - 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**
 - Achieve full active knee ROM (equal to uninvolved side)
 - Start stretching program for: Hamstrings, IT Band, Gastroc/Soleus, Hip flexors/Quads
- **Gait Drills**
 - Performed with slow and controlled motions
- **Functional Strengthening**
 - Squat, Box steps (back), Stationary lunge
- **Balance**
 - Increase balance and proprioception in all planes, Progress static to dynamic movement
 - SLS progression
- **Core Body**
 - Core progression
 - Start Cardio without Ant. Knee pain
 - 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**
 - Full active ROM is Expected
 - **Dynamic Agility Drills**
 - Develop dynamic flexibility to allow proper alignment during activities of increased speed
 - Progress stride length and velocity as movement control improves
 - Ex: Fwd, Bwd, Side skip, side shuffle, Carioca, start stop, back pedal acceleration, stationary fast feet, tall-fall-run
 - Slide board at 10 weeks
 - Plyosled at 12 weeks with and without meniscal repair
- **Functional Strengthening**
 - Progress single plane to multi-plane exercises and functional exercises
 - Prior to progression patient must display good alignment and control of multiplanar movements
 - Develop eccentric muscle control

- **Landing and Takeoff Drills (Not until 16 weeks)**
 - 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**
 - Emphasize balance with postural control and duration in addition to multi-plane movements
- **Core Body**
 - Advance core strengthening
 - 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)
 - Same drills as phase III but with larger size and speed of movement
- **Multi-planar Landing Control and Neuromuscular Reaction**
 - Progress from Dbl leg to Single leg impact control (*Not prior to 8 wks*)
 - Progress to cutting and pivoting (*not prior to 8 wks, or completion of Dbl leg progression*)
 - Progress to Jump Program dependent upon strength and physician release
- **Functional Movements and Strengthening**
 - Progress to single leg and multi-planar movements with rotation
- **Advanced Core Strengthening**
 - 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 for 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 uninjured before return to sport.

These guidelines are even for the super motivated patient.