Iowa State University Physical Therapy - ACL Protocol

This protocol is criteria/evaluation based. Time basis is included. (Time based protocols apply to approximately 70% of the patient population. Another 15% may heal faster, and the remaining 15% may heal slower).

POST-OP PHASE (Day 2-10)
Goals: Full knee extension, Control Effusion, Regain Quad Control
Restrictions: Crutches for 3-7 days, Brace Locked in Extension, Hamstring Graft 0-90° (Buck, Greenwald)

ROM:          Strength:          Function:
Prone Hang    ESTIM-Russian       Weight shifts
Wall Slides   Quad Sets/ Hamstring Sets
Heel Slides   SLR’s
             Gastroc
             Bilateral Leg Press
             Mini Squats

EVAL: Good Quad Set, decrease Effusion, Full extension, Good Patella Mob, Walking no crutches

PHASE 1- EARLY STRENGTH/CONTINUED ROM (2-3 weeks)
Goals: Full knee extension, reduce effusion, ROM: 0-90°, Full WB with Brace
Restrictions: Brace locked in EXT till 3 weeks, Hamstring Graft 0-90° (Buck, Greenwald)

ROM:          Strength:          Function:
Prone Hang    ESTIM-Russian       Unilateral balance
Wall Slides   SLR’s- all planes   Bilateral Rockerboard
Biodex for PROM (PRN) Standing Heel Raises   Bilateral BOSU/BAPS
Extension Aid (PRN) Hamstring Curls/with ball   Balance Beam Walks
             Mini Squats/Ball   Unilateral BAPS
             Step-ups, Fwd/side
             TKE
             Leg Press-Bilateral
             Lunges- 1/2 FWD
             Step-Downs- Lateral

3-4 WEEKS
Goals: Normal Walking Pattern, ROM: 0-120°, Decreased Effusion, Controlled Unilateral Balance,

ROM:          Strength:          Function:
Cont w/ROM,   Cont. w/ previous.   Cardio: Bike/Elliptical 5 min
As needed.    Unilateral Leg Press   Treadmill Walking –FWD
Add Flex Seat Step-up -multi angle   U/L Balance with reach
                   Stool Scoots   Speed ladder/Cone/Hurdles
                   Standing Ham Curls   Lunges 1/4 -Matrix
                   Romanians-(RDL’S)   BOSU -minisquats
                   Total Gym U/L squats   *May Begin Swimming
                   Wall Sits

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5-6 WEEKS
Goals: Discharge Brace use, normal walking gait, minimal effusion, ROM-WNL, Thigh Circumference <5 cm difference.

ROM:
As needed
Kneeling for FL

Strength:
Submax Isometrics
Step-Downs Fwd/Lat
TB walks
Squats with weights
Lunges increase depth
Single Leg Squat Touch
Ball Curls
Stool Scoots- single leg

Function:
Cardio: 20 minutes
Balance Reach UE/LE
U/L Stance Eyes Closed
Unilateral Bal./UE perturbation
Sports Cord Ex
Speed Ladder-increase Speed
TM –Bwd, side Walk
U/L Stance: Balance Disc
MiniTramp/BOSU

EVAL:
Swelling/ROM/ Girth
Leg Press One Rep Max
Or 10 Rep Max

Normal Gait Pattern:
-full knee extension/heel/toe

7-8 WEEKS
Goals: Begin functional ex. maintain or increase LE strength, Enhance proprioception, balance and neuromuscular control, increase Cardio fitness. During this time frame, the repair is more susceptible to stresses.

ROM:
As Needed

Strength:
Cont. W/ Strengthening
Multidirectional Step-downs
Squat Clocks
Large Step-ups

Function:
Walking Lunge/Twist Lunge
Total Gym/Leg Press
Rockerboard Squats
Speed Ladder

9-10 WEEKS
ROM:
As needed

Strength:
Squats with Bar
Isokinetics Knee Ext 90-30
Leg Ext, 90-45

Function:
Minitramp jogging
light plyos/good landing
Jump Rope
Rockerboard- eyes closed
LE circuit
Light jog-if ready

11-12 WEEKS
Goals: Increase function and strength, Begin plyo and agility, Increase Confidence

ROM:
As needed

Strength:
Full knee Extension
Unilateral Squat

Function:
Begin jog, treadmill/track
2 leg jumps
Side to Side Jumps (L-R)
Box/Depth Jumps
Bilateral Hops
Agility drills

EVAL:
Brace Fitting:Girth
Isokinetic Testing/Leg Press Max Rep
Function testing :6 meter timed
Hop; 20 Sec Line hop; Single leg Hop for Distance; Outcome Questionnaire