



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:

Prone Hang
Wall Slides
Heel Slides

Strength:

ESTIM-Russian
Quad Sets/Hamstring Sets
SLR's
Gastroc
Bilateral Leg Press
Mini Squats

Function:

Weight shifts

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:

Prone Hang
Wall Slides
Biodex for PROM (PRN)
Extension Aid (PRN)

Strength:

ESTIM-Russian
SLR's- all planes
Standing Heel Raises
Hamstring Curls/with ball
Mini Squats/Ball
Step-ups, Fwd/side
TKE
Leg Press-Bilateral
Lunges- ¼ FWD
Step-Downs- Lateral

Function:

Unilateral balance
Bilateral Rockerboard
Bilateral BOSU/BAPS
Balance Beam Walks
Unilateral BAPS

3-4 WEEKS

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

ROM:

Cont w/ROM,
As needed.
Add Flex Seat

Strength:

Cont. w/ previous.
Unilateral Leg Press
Step-up -multi angle
Stool Scoots
Standing Ham Curls
Romanians-(RDL'S)
Total Gym U/L squats
Wall Sits

Function:

Cardio: Bike/Elliptical 5 min
Treadmill Walking -FWD
U/L Balance with reach
Speed ladder/Cone/Hurdles
Lunges ¼ -Matrix
BOSU -minisquats
*May Begin Swimming

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

Hamstring Curl, -prone
Slide Board (6 wks, if strength is good)

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