

Sports Medicine Division

ANTERIOR CRUCIATE LIGAMENT (ACL) REVISION REHABILITATION PROTOCOL

The following is a protocol for postoperative patients following ACL reconstruction. The primary goal of this protocol is to protect the reconstruction while steadily progressing towards and ultimately achieving pre-injury level of activity. Please note this protocol is a guideline. Patients with additional surgery (i.e. collateral ligament repair, meniscal repair) will progress at different rates. Achieving the criteria of each phase should be emphasized more than the approximate duration. If a patient should develop an increase in pain or swelling or decrease in motion at any time, activity should be decreased until problems are resolved.

PHASE I: 0-2 WEEKS POSTOPERATIVE

GOALS:

- Full passive extension
- Flexion to 90 degrees
- Good quad control

AMBULATION, DRESSING, AND BRACE USE

Dressing – POD 1: Debulk dressing, TED Hose in place

– POD 2: Change dressing, keep wound covered, continue TED Hose

– POD 7-10: Sutures out, D/C TED Hose when effusion resolved

Brace x 6 weeks – Locked in extension for ambulation

– Open to available range when pt has good quad control (no extensor lag).

Crutches – Partial weight bearing (PWB) in brace

EXERCISES:

Patellar mobilization (teach patient)

Calf pumping

AAROM 0-90 degrees (passive extension, active flexion, heel slides)

Passive extension with heel on bolster or prone hangs

Electrical stimulation in full extension with quad sets and SLR

Quad sets, Co-contractions quads / Hamstring

Straight leg raise (SLR) x 4 on mat (in brace if poor quad control)

Total Gym (level 3-5) – Mini squats 0-45 degrees

– Passive flexion to 90 degrees max (push up with opposite leg)

Leg press 0-45 degrees with light resistance (up to ¼ body weight)

Hamstring curls – Standing

Stationary bike for range of motion – Complete cycle as able

Ice Pack with knee in full extension after exercise

PHASE II: ~2-4 WEEKS POSTOPERATIVE

GOALS:

- ROM 0-110 degrees
- No effusion
- No extensor lag

AMBULATION AND BRACE USE

Brace x 6 weeks – Open to available range

Crutches – PWB in brace

EXERCISES:

Continue appropriate previous exercises and following ex without brace

Scar massage when incision healed

AAROM, AROM through full range as tolerated
SLR x 4 on mat – Add light ankle weights if quad control is maintained

Total Gym – Progress levels and ROM of mini-squats as tolerated

Leg press 0-60 degrees with light resistance (up to ¼ body weight)

Hamstring curls – Carpet drags or rolling stool (closed chain)

Double leg heel raises

Stationary bike – Progressive resistance and time

Stretches – Hamstring, Hip Flexors, ITB

Treadmill – Forwards and backwards walking
Stationary bike – 15-20 minutes at a time, at least 70 rpm

PHASE III: ~4-6 WEEKS POSTOPERATIVE

GOAL: Full ROM

AMBULATION AND BRACE USE:

Brace x 6 weeks – Open to available range
Crutches – PWB in brace

EXERCISES:

Continue appropriate previous exercises
PROM, AAROM, AROM to regain full motion
Weight shifts
Mini squats 0-60 degrees – In parallel bars
Leg press 0-60 degrees with light resistance (up to ½ body weight)
Hamstring curls on weight machine with light resistance

PHASE IV: ~6-9 WEEKS POSTOPERATIVE

GOAL: Normal Gait

AMBULATION AND BRACE USE:

D/C Brace
Crutches – weight bearing as tolerated (WBAT),
D/C when gait is WNL

EXERCISES:

Continue appropriate previous exercises
Standing SLR x 4 with light Theraband bilaterally
Wall squats 0-45 degrees, progress to single leg
Leg press 0-60 degrees with resistance as tolerated
Hamstring curls with resistance as tolerated
Forward, lateral and retro step downs in parallel bars
– No knee flexion past 45 degrees (small step)
Single leg heel raises
Proprioceptive training – Single leg standing in parallel bars
– Double leg BAPS for weight shift

PHASE V: ~9-12 WEEKS POSTOPERATIVE

GOAL: Walk 2 miles at 15 min/mile pace

EXERCISES:

Continue appropriate previous exercises with progressive resistance
Wall squats 0-90 degrees
Leg press 0-90 with resistance as tolerated
Forward, lateral and retro step downs (medium to large step)
Hip weight machine x 4 bilaterally
Proprioceptive training – Single leg BAPS, ball toss and body blade
– Grid exercises
Treadmill – Walking progression program
Elliptical trainer
Pool therapy – Walking / running (no kicking)

PHASE VI: ~3-4 MONTHS POSTOPERATIVE

GOAL: Walk 3 miles at 15 min/mile pace

EXERCISES:

Continue appropriate previous exercises
Fitter
Slide board
Stairmaster – Small steps
Pool therapy – No swimming laps

PHASE VII: ~4-6 MONTHS POSTOPERATIVE

GOAL: Equal thigh girth

EXERCISES:

Continue appropriate previous exercises
Knee extension weight machine
Short arc quads
Functional activities – Figure 8s, gentle loops, large zigzags
Pool therapy – Swimming laps
Quad stretches

PHASE VIII: ~6-9 MONTHS POSTOPERATIVE

GOALS: Return to all activities

EXERCISES:

Isokinetic testing at 180 and 300 degrees/sec – Must have 80%
of opposite leg to clear for straight line running

Continue appropriate previous exercises

Home/gym program

Agility drills / Plyometrics

Sit-up progression

Treadmill – Running progression program if cleared

Transition to home / gym program

No contact sports until 12 months post-op