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

**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*