



Rehabilitation Guidelines for ACL Repair

PHASE I (0 - 2 weeks)

Appointments

- Physical therapy 2-3/week, beginning 2-5 days post-op

Rehabilitation Goals

- Full extension symmetrical to contra-lateral knee before the first post-op visit at 2 weeks
- Flexion to 120°
- 20° SLR without quad lag
- Off of crutches

Precautions

- If brace is locked in extension, can weight bear as tolerated
- If brace is unlocked, non-weight bearing with crutches
- May remove brace for sleep and exercises after 1 week

Suggested Therapeutic Exercises

- Prolonged extension – prone hang, supine with roll under ankle
- Heel Slides, wall slides, prone knee flexion
- Isometric quad set, then SLR
- Hamstring isometric
- 4-way hip and ankle exercise including calf pumps
- Initiate proprioceptive/balance exercise to include single leg stance. Weight shifts forward, retro, lateral
- Patellar mobilizations (especially cranially)

Cardiovascular Exercises

- Stationary bike-no resistance

Progression Criteria

- DC crutches when quad control returns, full extension achieved stable with low fall risk; wean to 1 crutch if steady in gait



PHASE II (2 - 3 weeks)

Appointments

- Continue physical therapy 2-3x/week

Rehabilitation Goals

- Full ROM
- Advanced strengthening
- Consider early neuromuscular retraining

Precautions

- Wear brace unlocked until good quad control except for sleeping, exercises

Suggested Therapeutic Exercises

- AVOID OPEN CHAIN RESISTIVE ESPECIALLY WITH WEIGHTS (resistance bands OK for hamstring/quad)
- Quad: mini squats/wall squats, step ups
- Hamstring: Bridge, Standing hamstring eccentrics
- Calf: heel raises, calf press
- Hip extension, ABD, ADD
- Consider balance board/wobble board for early NM retraining

Cardiovascular Exercises

- Stationary bike: as soon as motion (0-115°) allows
- Elliptical
- Stairmaster
- Pool: Walking, Deep water aqua jogging, **no kicking (begin at 2-6weeks)**

Progression Criteria

- Full ROM
- Minimal Effusion
- Functional control for ADLs achieved
- DC brace: with adequate quad control for gait on level surfaces, inside. 6 weeks post-op



PHASE III (4 - 8 weeks)

Appointments

- Continue physical therapy 1-2x/week as indicated

Rehabilitation Goals

- Maintain full ROM (shoulder be full extension and to 135° flexion)
- Progress neuromuscular retraining program
- Core integration

Precautions

- No downhill walking/running, downhill skiing, downhill biking until 4.5 months

Suggested Therapeutic Exercises

- HEP 5x per week
- Progress neuromuscular proprioceptive/balance exercises including single leg balance progression – varying surfaces
- Pool: 4 way hip, lateral movement, deep water jogging in place (no freestyle or frog/breaststroke kick)
- Strengthening: lunges, sport cord, wall squats, step up/down

Cardiovascular Exercises

- May begin road biking outdoor on flat roads only
- May begin treadmill walking

Progression Criteria

- Neuromuscular exercises without difficulty



PHASE IV (8 weeks - 3 months)

Appointments

- Continue physical Therapy 1-2/week as indicated

Rehabilitation Goals

- 12 weeks: light running/hopping without pain or swelling, progress to running patterns at 75% speed
- Good jumping mechanics- NO DYNMAIC VALGUS
- Hop drills without difficulty

Precautions

- No downhill walking/running, downhill skiing, downhill biking until 4.5 months

Suggested Therapeutic Exercises

- HEP 5x per week
- Agility drills: Shuffling, Hopping, Running Patterns
- Sport Specific closed-chain exercises: leg press (0-60°), step ups, mini squats (0-60°), short arc quad (30°-90°), hamstring curls with light weight/high repetition

Cardiovascular Exercises

- Begin endurance closed-chain exercises 3-4x/week: stairmaster, stationary bike, elliptical, nordic Track (short stride)
- Progress jogging on treadmill or even ground to running patterns at 75%
- Pool: may start freestyle swimming (avoid frog/breaststroke kick), progress to shallow water jogging

Progression Criteria

- Running without knee effusion
- Hopping/agility drills without knee pain or effusion



PHASE V (3 - 6 months)

Appointments

- Continue physical therapy 2 visits per month to review HEP

Rehabilitation Goals

- Able to complete a running program
- May begin plyometric program: jump rope exercises
- Hamstring and quadriceps strength 90% of normal leg
- Return to sport testing at 9 months post-op, prior to MD visit

Precautions

- Earliest return to full sports = 9 months

Suggested Therapeutic Exercises

- HEP 4-5x per week
- Agility drills: shuffling, hopping, running patterns
- Sport Specific: Plyometric Program, Fast Straight Running, backward running, cutting, cross-overs, carioca, etc. in controlled environment

Cardiovascular Exercises

- Pool available: may advanced swimming (avoid frog/breaststroke kick)

Progression Criteria (Return to Sport)

- Quadriceps and hamstring strength at least 90% of opposite leg
- Single leg hop test and vertical jump at least 90% of opposite leg
- Jog, full speed run, shuttle run, and figure running without a limp
- Full controlled acceleration and deceleration
- Squat and rise from a full squat
- No effusion or quadriceps atrophy