



ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION

REHABILITATION PROTOCOL

REHABILITATION PROGRESSION

The following is a general guideline. Please consult Dr. Syal/Dr. Soswa if there is any uncertainty concerning advancement of a patient to the next phase of rehabilitation. Rehabilitation should be individualized according to patient status.

PRECAUTIONS

- supervised physiotherapy is expected for approximately 2-6 months
- functional ACL brace to be worn immediately post-op or once able to fit, and continued for duration of rehab
- bathing/showering without brace after 14 days
- use crutches to weight bear for 2 weeks – may begin ambulating immediately post-op

PHASE I (WEEK 0-2)

- isometric hamstring & quadriceps exercises (if no meniscal repair) & patellar mobilizations
- hip active ROM, foot and ankle exercises
- multi-angle quads sets – isometric hamstring exercises every 20° in available range
- heel slide with active assisted flexion
- passive knee extension stretching
- functional electrical stimulation (for quads control, as needed)
- by 2-3 weeks – wean off crutches: to full weight bearing, no aids
- cryotherapy for knee & modalities for inflammation as needed

PHASE 2 (WEEKS 2-6)

- may begin bathing/showering once wounds assessed in followup
- continue with ROM exercises
- start closed kinetic chain exercises for quads, hamstrings & calf muscles – in gravity eliminated plane or with support
- start stationary bike (avoid hyperextension)
- start calf strengthening exercises in weight bearing
- can start pool rehab (no open kinetic chain exercises)
- cryotherapy for knee & modalities for inflammation as needed

PHASE 3 (WEEKS 6-16)

- start treadmill (forward)
- proprioceptive exercises (start bilaterally and progress to unilateral)
- continue with closed kinetic chain exercises
- quads and hamstring exercises in weight bearing
- continue to progress Closed Kinetic Chain exercises
- upgrade functional exercises



PHASE 4 (MONTHS 4-9)

- continue with ROM, strengthening, endurance and functional activities
- can initiate open kinetic chain exercises (to full knee extension)
- initiate plyometric program as appropriate for patient's functional goals
- functional progression, including but not limited to:
 - ▶ walk/job progression
 - ▶ forward/backward running, 1/2, 3/4, full speed
 - ▶ cutting, cross-over drills, etc.
- initiate sport-specific drills as appropriate for patient

PHASE 5 (MONTHS 9-12)

- safe return to athletics
- maintenance of strength, endurance & proprioception
- use of functional ACL brace with sport activity – for completion of 12 months post-op
- possible continuation of ACL brace at discretion of surgeon

SOURCES:

- Medcenter One Inc. (Academy of Sports Medicine and Exercise Physiology Services); Bismarck, North Dakota (from the internet)
- Clinical Orthopaedic Rehabilitation. Ed.: S. Brent Brotzman; Mosby-Year Book, Inc., 1996
- Shelbourne KD, Nitz P: Accelerated rehabilitation after anterior cruciate ligament reconstruction. Am J Sports Med 18(3): 292-99, 1990
- DeCarlo M, Shelbourne KD, Oneacre K: Rehabilitation Program for Both Knees When the Contralateral Autogenous Patellar Tendon graft Is Used for Primary Anterior Cruciate Ligament Reconstruction: A Case Study. J Orthop Sports Phys Ther, 29(3): 144-153, 1999