

REHABILITATION PROTOCOL: ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION WITH PATELLAR TENDON BONE (BTB) AUTOGRAFT

□ Phase 1 (Weeks 0-2)

- Weight bearing: As tolerated with crutches (modified if concomitant meniscal repair, meniscal transplant or articular cartilage procedure is performed)
- Hinged knee brace
 - Unlocked for ambulation and sleeping (weeks 0-2)
 - Unlocked for ambulation and removed while sleeping (weeks 2-6)
- Range of motion Active assisted range of motion (AAROM) → Active range of motion (AROM) as tolerated
- Therapeutic exercises
 - Quad and hamstring sets and heel slides
 - Non weightbearing stretch of the gastrocnemius and soleus
 - Straight leg raise with brace in full extension until quad strength prevents extension lag

□ Phase 2 (Weeks 2-6)

- Weight bearing: As tolerated, discontinue crutches
- Range of motion: Maintain full extension, work on progressive knee flexion
- Therapeutic exercises- Continue Phase 1 then add exercises below at 4 weeks
 - Closed chain extension exercises
 - Hamstring curls, toe raises, balance exercises
 - Progress to weightbearing stretch of the gastrocnemius and soleus
 - Begin use of stationary bicycle

□ Phase 3 (Weeks 6-16)

- Weight bearing: Full
- Hinged knee brace: Discontinue brace use when patient has achieved full extension with no evidence of extension lag
- Range of motion: Full and painless
- Therapeutic exercises
 - Begin hamstring strengthening
 - Advance closed chain strengthening exercises, proprioception activities
 - Begin use of stairmaster/ elliptical
 - Can start ahead running at 12 weeks

□ Phase 4 (Months 4-6)

- Continue with strengthening (quad/hamstring) and flexibility
- Range of motion: Full and painless
- Therapeutic exercises
 - Continue hamstring strengthening
 - Begin cutting exercises and sport-specific drills at 6 months
 - Maintenance program for strength and endurance
 - Return to sports at 9-12 months