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ACL Reconstruction Pre- and Post-op Physical Therapy Protocol

PRE-OPERATIVE PHASE (Prehab)

Primary goals: Eliminate swelling; ROM - full extension; FWB; Normalize gait

- Crutch ambulation training
- Post-op exercise instruction/training
 - Quad sets, leg lifts
 - Active flexion/passive extension
 - Patella mobilization
 - · Abductor, gluteal and core strengthening
 - Quadriceps/Hamstrings isometrics at 90°
 - Quadriceps re-education
 - Restoration/Improvement of ROM
 - Reduction of edema/inflammation
 - Normalize gait

POST-OPERATIVE PHASE

*Blood Flow Restriction (BFR) encouraged at all stages

Weeks 0-2 Primary goals: Eliminate swelling; ROM – full extension; FWB; Regain quad control

- WBAT, with brace, crutches until gait controlled, discontinue crutches as progressing (by 7-10 days)
- Lock brace for ambulation
- Brace locked in extension for sleep, Brace unlocked for when sedentary to do exercises
- ROM as tolerated (minimum 0-90°), heel and wall slides
- Patella mobilization
- Ankle pumps, straight leg raise, quad sets, gluteal sets, hamstring stretch
- Sit to stand squats 0-45°
- BAPs proprioception
- Swelling/effusion control

Weeks 2-4 Primary goals: Increase ROM; Increase total leg strength; Normalize gait

- Discontinue brace (if possible)
- ROM as tolerated (minimum 0-110⁰), emphasis on full extension
- Emphasize patellar mobilization
- Stationary bike
- Step ups: anterior 4 inches @ 2 weeks; 6 inches @ 3 weeks
- Balance board Bilateral: frontal and sagittal planes
- Half squats
- Multi-angle isometrics, leg raises (4 planes), hamstring/calf stretching
- BAPs FWB
- Unilateral stance Leg press Bilateral 0-90⁰

Weeks 4-6 Primary goals: Normal ADLs; Increase functional capacity; Increase strength

- ROM WNL
- Treadmill walking (if gait normal)
- Stairmaster ipsilateral rotation and straight
- Mini squats bilateral
- Step ups Anterior: 8 inches
- Step ups Anteromedial: 8 inches
- Step downs Anterior & medial: 4 inches, progress to 8 inches
- Hamstring curls
- Unilateral squats
- Unilateral stance on trampoline
- Leg press unilateral

Weeks 6-12 Primary goals: Increase functional leg strength; Normalize balance and proprioception

- 2# ball toss on trampoline unilateral stance increase dispersion with improved control
- Balance board unilateral sagittal & frontal
- Step downs posterolateral @ 8 inches
- Lunges anterior and lateral for distance and speed (not depth)
- Increase strengthening especially in frontal and transverse planes
- Stairmaster contralateral rotation and straight
- Sliding board
- Emphasize eccentric quad
- Continue closed chain, step ups, mini squats, leg press
- Hip abduction/adduction, calf raises

Weeks 12-16 Primary goals: Increase agility and speed of training; Normalize strength; Increase muscular endurance

- Initiate Plyometrics
- Initiate running program (*16 weeks for allograft)
- Initiate agility drills
- Sport specific training
- Sliding board side-side with rotation
- Lunges anterolateral, anteromedial
- Bilateral hopping low intensity/high volume
- Fitter side-side

Months 4-6 Primary goals: Gradual return to athletic activity

- Jumping
- Unilateral hopping
- · Agility drills; running, cutting
- · Accelerate sport specific drills and training
- · Return to sport typically after 9 months, per MD

Months 6-12 Primary goals: discharge into home program; release to full sport participation

 Decision for full return to sport is based on peer-reviewed physical testing and performance in sport-specific drills