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ACL Reconstruction Protocol

This protocol was developed to provide therapists with a guideline of treatment for a patient who has undergone an ACL Reconstruction. It is important to take into consideration the type of graft, as well as, the patient's pre-injury level. Protocol may be modified if there is involvement or repair of any other structures. If there are any questions concerning the progression of this protocol, please contact our physical therapy department at (508) 824 – 1000.

Phase I – Immediate Post-surgical Phase

Goals:

Maintain integrity of the graft
Control pain and swelling
Prevent quad muscle inhibition
Regain *full* knee extension equal to uninjured side

Precautions:

Weight bearing as tolerated in brace
Keep brace locked in extension for sleeping
Keep incision clean and dry

Weeks 0 – 2:

Dressing change 5-7 days post-op
Initiate therapeutic exercises:

- Quad sets
- HS Curls
- SLR x4 directions
- (B) Calf Raises
- Marching
- Calf/HS stretches

PROM for knee flexion/extension
Patella Mobilization
NMES for quad re-education
Gait Training
Ice with elevation as needed

Criteria for progression to Phase II:

Knee ROM 0 – 90 °

SLR without lag
Ambulate with increasing weight bearing with crutches, or independently if good quad control

Phase II – Early Strengthening Phase

Goals:

Normalize gait
D/C crutches
Regain full knee ROM

Precautions:

Remain in brace for ambulating
Keep brace locked in extension for sleeping
until 4 weeks post-op

Weeks 2 – 4:

Continue with phase 1 exercises
Stationary Bicycle
Step Ups (2 – 4")
(U) Calf raises
Mini-Squats (0 - 40°)
SLR x4 with progressive resistance
Knee extension 90°-40°
Balance / SLS (Floor)

Criteria for progression to Phase III:

Knee ROM 0 - 120°
Minimal to no joint effusion
Good quad control
(I) Ambulation without deviation

Phase III – Intermediate Strengthening Phase

Goals:

Improve strength
Ascend/Descend stairs

Precautions:

No heavy or sudden lifting and pushing
Gradual increase in resistance

Weeks 4 – 8:

Progressive strengthening program:

- Standing hip 4 way with progressive resistance
- Leg Press (0 - 100°)
- HS curls with resistance

Increase closed kinetic chain activities:

- Step Up/Down
- Wall slides
- Lunges

Progress proprioceptive activities

- Airex, Rockerboard, BOSU

Stairmaster/Elliptical if no patellafemoral symptoms

Criteria for progression to Phase IV:

Full ROM

Painfree 6" Step down without UE (A) with good eccentric control

Phase IV – Advanced Strengthening Phase

Goals:

Progression to (I) HEP/gym routine
Maintain full pain-free ROM

Week 8 – 12:

Continue to progress phase III exercises:

- Leg Press (Unilateral/Bilateral)
- Squats with progressive resistance
- Lunges (Lateral, Backward, Travel)
- Proprioceptive activities with perturbations

Initiate Plyometric program

- Jumping (8 – 10 weeks)
- Hopping (10 – 12 weeks)

Walk / Jog Intervals

Phase V – Return to activity

Weeks 16 – 24:

Progression of all prior exercises
Initiate sport specific training
Progress jogging program to include speed and agility

Criteria for Return to Sport:

- Painfree
- ROM WNL
- No Effusion
- KT1000 < 3mm difference
- (U) Leg Press / 1 RM = bilaterally
- Hamstring strength 100% of contralateral side
- Jog 2 miles
- Hop Test 85% of uninjured LE (single hop, triple hop)
- Girth mid-quad = Bilaterally
- Proprioceptive test 100% of uninjured LE

Other Precautions:

Patellar Tendon autograft

- Be cautious of exercises with excess patellofemoral forces
- Monitor any anterior knee pain / patellofemoral pain