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Postoperative Rehabilitation Guidelines

Anterior Cruciate Ligament (ACL) and Posterolateral Corner Reconstruction

The following protocol is intended as a general guideline for physical therapist, athletic trainer, and patient after combined anterior cruciate ligament (ACL) and posterolateral corner (PLC) reconstruction. These guidelines are designed to facilitate the expedited and safe return to athletic or professional activity and is based on a review of the current scientific principles of knee rehabilitation. For the treating health care provider this protocol should not serve as a substitute for individualized clinical decision making during the patient's post-operative course following ACL+PLC reconstruction. It should rather take into consideration the individual's physical findings, progression, and possible post-operative limitations. If the therapist or patient requires assistance or encounters any postoperative complication they should consult with **your surgeon**.

Start supervised physical therapy within 7-10 days after surgery

Postoperative Restrictions Specific For ACL + PLC Reconstruction

- The knee is immobilized in full-knee extension at all times during the first 6 weeks postoperatively, except when working on knee range of motion (ROM) or performing quadriceps exercises.
- Limited weight bearing is maintained for 6 weeks.
- Patients should avoid tibial external rotation, and external rotation of the foot/ankle, especially when sitting, for the first 4 months postoperatively.
- Open-chain hamstring exercises are avoided until 4 months postoperatively.

Phase I (Postoperative and Protection Phase)

Postop weeks 1-2

- Edema management: R.I.C.E. = Rest, ice, compression, elevation
- Quadriceps sets and straight leg raises (SLR's) performed in the knee immobilizer. Quadriceps sets can be performed hourly up to 30 repetitions and SLR up to 30 repetitions 4 to 5 times per day.
- Four times a day gentle passive and active assisted ROM exercises. Goal is 90° of knee flexion by the end of 2 weeks, and 0° of knee extension.
- Core (lumbopelvic and hip) stabilization exercises in knee immobilizer that do not increase knee forces in varus, hyperextension, or tibial external rotation.

Postop weeks 3-6

- Continue with passive and active assisted ROM exercises 4 to 6 times per day. Patient should achieve full extension at this time, and 120° of knee flexion.
- Continue with quadriceps sets and SLR's.

Phase II (Initial Rehabilitation Phase)

Postop weeks 7-12

- Start partial weight bearing using crutches. Goal is to ambulate full weight bearing without crutches within 2 weeks. Patient must be walking without a limp to discharge crutches. Discontinue knee immobilizer if able to perform SLR without knee extension lag.
- Initiate use of stationary exercise bike 105° if knee flexion ROM is achieved. Working on motion, beginning with 5 minutes every other day and increasing to 20 minutes daily, based on the knee's response to increased activity. If soreness or effusion is evident reduce time or days utilizing the stationary bike.

Postop weeks 13-16

At this stage the patient should have a normal gait pattern, without the presence of a limp or Trendelenburg sign. The physician should be notified if the patient is lacking 5° or more of extension or has less than 110° of flexion.

- Leg press up to 25% of the patient's body weight to fatigue. Knee flexion allowed to a maximum of 70°.
- Squats using weight up to 50% body weight 10 repetitions, again not exceeding 70° of knee flexion. Slow progression to full body weight.
- Closed kinetic chain exercise progression: double-limb squatting, lunges, single-limb squatting, etc. All exercises performed with less than 70° of knee flexion.
- Daily stationary biking

Phase III (Progressive Strengthening Phase)

Postop weeks 17-24

Goals: improve quadriceps strength and function, increase endurance, improve coordination, and improve proprioception.

- Walking program: 20 to 30 minutes daily with a medium to brisk pace. Add 5 minutes per week.
- Resistance can be added to bicycling as tolerated. Biking done 3 to 5 times per week for 20 minutes, and the lower extremities should feel fatigued post biking.
- Advanced closed kinetic chain exercise progression: addition of unstable surface, movement patterns, resistance, etc.
- Return to run program once patient is able to perform 20 repetitions of involved lower extremity single-limb squatting to greater than 60° of knee flexion with good control.
- Plyometric progression: supported jumping, jumping, leaping, hopping, etc.

Phase IV (Return to Activity Phase)

Postop weeks 25-36

Goals: achieve normal strength, flexibility, endurance and neuromuscular control, gradual and supervised return to athletic activities

- Physician will give clearance for cutting and pivoting and sports simulation activities as appropriate. Physician clearance is based on clinical exam findings and functional progression with therapy.
- Advance plyometric program
- Progress running and agility program
- Initiate cutting, jumping drills
- Develop sport-specific skill program and functional progression
- Gradual return to sport (MD directed)
- Functional testing often performed before return to sport. Isokinetic testing (concentric) of hamstrings (goal 100%) and quadriceps (goal >90%), Single leg hop test (goal >90%) Complete functional knee scores (subjective scoring, IKDC, Tegner, Lysholm, KOOS)

Please do not hesitate to contact the surgeon's office to discuss the individual patient's findings and progress at any time.