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Shapiro's Physical Therapy Prescription
ACL Protocol

The physical therapist's role in the ACL deficient/reconstruction patient's recovery is essential. You must help teach the necessary exercises. You need to be sympathetic and encouraging. You have to guide them back to their normal level of activities. In other words, you need to be their friend, educator, psychologist, and taskmaster. The problem is that you now have to do this in fewer sessions than you may have used in the past. If you are wondering why, there are two reasons. First, insurance companies are paying for fewer sessions. Second and more importantly, the more the patient is involved in, responsible for, and working on his/her recovery, the faster and better will be the recovery.

The following is my guide for you. It includes the phases the patients will go through with a suggested time frame, a suggested number of visits, and suggested exercises.

Pre-operative:

This is our chance to see how interested and involved the patient is and wants to be in a full and rapid return to his/her pre-injury level of activity. Encourage the patient to join a fitness club.

- Objectives:
1. Full range of motion and know stretches
 2. Know exercises for quads and hams
 3. Understanding of the work and time necessary to return to pre-injury level of activity. Mental preparation.
 4. Reduce swelling.
- Program:
1. Rest
 2. Ice
 3. Elevation
 4. Stretching
 5. Strengthening
 6. Brace, if necessary.
 7. Activities as tolerated.
- Sessions:
1. One of two sessions should be all that is necessary to accomplish the objectives stated above if the patient is going to surgery.
 2. If the patient is going to try conservative treatment, up to six sessions will probably be needed.

Post-operative:

The patient has now had surgery. They are having pain and they are scared of the work that lies ahead. They are also having doubts about whether they will be able to return to their pre-injury level of activity. Be there for them, but constantly remind them that they must put in the time and energy in order to see results and that you will help guide them to recovery.

*** Use pain and swelling as a guide to progression through all exercises & each phase.**

Phase I (post-op days 1-6):

- Precautions: 1. No forceful ROM
2. Wear brace for all activities.
- Objectives: 1. Full passive extension and at least 90 degrees flexion.
2. Gait without assistive devices (assuming no other surgery).
3. Decrease swelling.
- Exercises: Prone hang and towel extension
Wall hangs and heel slides
Quad set co-contraction with E-stim and/or biofeedback
Functional standing simultaneous quad/ham co-contraction
Straight leg raise (SLR)
Hamstring sets (30, 60, and 90 degree isometrics)
Isometric hip abduction
Plantarflexion with tubing
Calf raises
- Sessions: 1. One to two sessions
2. If the patient looks to be able to use and will benefit from the E-stim and/or biofeedback unit(s), please obtain one for home use.

Phase II (post-op days 7-14):

- Precautions: 1. No forceful ROM
2. Wear brace for knee exercises
- Objectives: 1. Full active extension and at least 120 degrees flexion.
2. Normal gait without assistive devices (assuming no other surgery).
3. Minimal swelling.
4. Soft tissue healing
- Exercises: 1. All those in phase I
2. Hip machine
3. Stationary bike when flexion is 115 degrees minimum. (No resistance)
4. StairMaster, if normal gait pattern has been obtained.
5. Patellar mobilization
6. Soft tissue mobilization (when soft tissues are fully healed).
- Sessions: One to two sessions

Phase III (post-operative weeks 2 to 5):

- Precautions: 1. Wear brace for all open chain exercises and for closed chain exercises as the patient feels necessary
- Objectives: 1. Full range of motion
2. Progress exercises.
3. Start agility work.
4. Start swimming when wounds are healed. (If pool is available.)
- Exercises: 1. Continue exercises begun in phases I and II
2. Resistance on the bicycle should be increased.
3. Treadmill, both forward and retrograde.
4. Hamstring curls
5. Leg press
6. Step-ups and step-downs
7. Wall squats – ¼ squats
8. “Butt blaster”
9. Retro-lunges
10. Proprioception: one-legged stance, single leg ball pick-up, trampoline, BAPS
11. Single leg stand /sit with chair
12. Agility walking progression –Ickey, forward, and Clock shuffles
- Sessions: Up to 4 sessions (about 1 per week)

Phase IV (post-operative weeks 5 and on):

- Precautions: 1. Use of the brace is per patient’s comfort level, except for skiing and contact sports where the brace is required.
2. Return to unrestricted sports should not be allowed until the patient has completed the first 5 objectives listed below.
- Objectives: 1. 100% active range of motion
2. 90% or more quadriceps strength
3. 100% hamstrings strength
4. A hamstring to quadriceps strength ratio of 2/3 or more
5. Demonstrates a proficient level of proprioception and agility to allow participation in sports.
- Exercises: 1. Progress to all exercises described in phases 1 to III
2. Jump rope
3. Add other strengthening exercises as appropriate.
4. Agility drills, sports specific.
- Sessions: 5 sessions (one a month, up to post-op month 6)