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### **Proximal Hamstring Tendon Repair Rehabilitation Guidelines**

#### **Weeks 0-6**

##### **Goal:**

- 1) Protection of the surgical repair

##### **Precautions:**

- 1) 20 Pounds weight-bearing with crutches for 6 weeks (Toe-touch)
- 2) No active hamstring contractions
- 3) No active knee flexion against gravity

##### **Durable Medical Equipment**

- 1) Knee brace is to be worn at all times, including sleeping. It should be locked at 30 degrees while you are up, and can be moved to 90 degrees for sitting.

##### **Exercises:**

- 1) Lower abdominal setting (5 sec holds x 20/day)
- 2) isometrics hip abduction/adduction/external rotation (5 sec holds x 10/day)
- 3) Quadriceps sets (4 x 20 reps/day)
- 4) 5 Ankle pumps (20-30 reps/hour)

##### **Other:**

- 1) Light desensitization massage to the incision and posterior hip

- 2) scar massage

### **Weeks 6-12**

#### **Goals:**

- 1) Restoration of normal gait
- 2) Weight-bearing progression to full weight bearing as tolerated
- 3) Gradual restoration of activities of daily living

#### **Precautions:**

- 1) Initiation of gentle hamstring strengthening exercises (no weight)
- 2) No hamstring stretching exercises

#### **Exercises:**

- 1) Continue week 0-6 exercises
- 2) Increasing weight bearing following 6 week follow up
  - i. First week: 50% weight bearing
  - ii. Second Week: 75% weight bearing
  - iii. Third Week: 100% weight bearing
- 3) May begin active knee flexion against gravity (concentric)
- 4) Weight shifts
- 5) Gentle quadruped rocking
- 6) Gentle stretches for hip flexion and adduction
- 7) Gluteus medius strengthening is progressed to isotonic in a side-lying position (clam shells)
- 8) Lower abdominal strengthening
- 9) Shuttle/Leg Press with light weight bilaterally ½ range (week 9)

## Months 3-4

### Goals:

- 1) Return to unrestricted activities of daily living (ADL) at home and work
- 2) Hamstring strengthening

### Exercises:

- 1) Continue week 6-12 exercises
- 2) Begin hamstring flexibility exercises
- 3) Begin hamstring strengthening exercises
  - Begin with hamstring curls strengthening exercises with the patient standing with the hip joint held in neutral position and the lower leg moving against gravity in pain-free arcs
  - Resistance is increased a pound at a time as tolerated with emphasis on high repetitions (30 reps) and high frequency (4-5 times/day)
  - When the patient is able to move through a full and pain-free knee flexion arc with 8-10 pounds of high reps, patients can transition from standing to machine hamstring curls.
- 4) Begin total leg and hip strengthening exercises:
  - Quarter squats: Begin bilaterally and progress to unilateral status
  - Heel raises: Begin bilaterally and progress to unilateral status
  - Gluteus maximus strength exercises progress from prone (heel pushes with the knee flexed at 90° to hip extension with the knee flexed at 90° to hip extension with an extended knee) to supine (bilateral to unilateral bridging)

- Gluteus medius strengthening is further progressed to the upright position (hip hiking and multi-hip machine).
  - Patients can begin unilateral knee extension and leg press activities with light resistance and increase resistance as the surgical hip tolerates.
- 5) Balance and Proprioception (Balance board → foam → dynadiscs)

### **Months 5-9**

Goal:

- 1) Completion of a functional program for the patient's return to sport activity

Exercises:

- 1) Continue week 12 exercises
- 2) Perform advanced proprioceptive training
- 3) Closed kinetic chain hamstring exercises, such as advanced step downs, double to single-leg Swiss ball hamstring curls, resisted incline hip extensions, Roman dead-lifts, and half to full squat progression with progressive resistance, can gradually be introduced.
- 4) Low level plyometrics, such as jump rope, step lunges in multiple directions with progression to walking lunges, can be introduced.
- 5) Patient may begin a light jogging progression
- 6) Return to sporting activities possibly at 6-9 months postoperatively

### **Progression Criteria to Return to Sport**

- 1) No pain with normal daily activities
- 2) Hip and knee range of motion within functional limits

- 3) Community mobility without pain
- 4) Hamstring strength is within normal limits