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**Proximal Hamstring Tendon Repair Rehab Protocol**

Patient: \_\_\_\_\_ Date: \_\_\_\_\_ Surgery Date: \_\_\_\_\_

**Weeks 0-6**

Goal:

- 1) Protection of the surgical repair
- 2) Protection of open incision

**Precautions:**

- 1) Weight bearing as tolerated with crutches for 6 weeks. Limit active hip extension with gait to tolerance.
- 2) No active hamstring contraction
- 3) No hip flexion greater than 30° for first 2 weeks (exception is restroom)
- 4) No active knee flexion or hip extension against gravity

Durable Medical Equipment

- 1) Game Ready Groin Wrap cold therapy for 6 times per day for 20 minutes per session (Ice bags or frozen vegetables okay)
- 2) Crutches- TTWB for 2 weeks, PWB for next 4 weeks

Exercises:

- 1) pelvic tilts (5 sec holds x 20/day)
- 2) NMES c SAQ (1/2 bolster) with hip flexion less than 20 degrees
- 3) isometrics hip flexion and external rotation (5 sec holds x 10/day)
- 4) Quadriceps sets (5 reps x 2 sets x 3-5 sets/day)
- 5) 5 Ankle pumps (20-30 reps/hour)
- 6) Begin passive range of motion of the knee and hip at week 2. Do not exceed 30° of hip flexion for first 2 weeks. Do not allow knee extension beyond the restrictions stated above and limited by pain.
- 7) Begin gentle active range of motion of the knee and hip at week 4. Do not exceed 45° of hip flexion. Do not allow knee extension beyond the restrictions stated above and limited by pain. No active knee flexion against gravity.

Other:

- 1) Light desensitization massage to the incision and posterior hip
- 2) scar massage
- 3) silicon patch over incision after fully closed.

## **Weeks 6-9**

### Goals:

- 1) Restoration of normal gait
- 2) Weight-bearing progression to full weight bearing as tolerated
- 3) Return of pain-free functional ADL (soreness and weakness expected)

### **Precautions:**

- 1) No hamstring strengthening exercises
- 2) No hamstring stretching exercises

### Exercises:

- 1) Continue to progress week 0-6 exercises
- 2) May begin active knee flexion against gravity (concentric)
- 3) Weight shifts
- 4) Straight leg raises or SAQ into SLR
- 5) Gentle quadruped rocking
- 6) Gentle stool stretches for hip flexion and adduction
- 7) Hip ab and adductor strengthening is progressed to contractions against gravity in a side-lying position (clam shells, SL abduction/adduction)
- 8) May begin soft tissue mobilization for posterior chain including L and T spine, lateral thigh and hip flexor group

## **Weeks 9-16**

### Goals:

- 1) Return to unrestricted activities of daily living (ADL) at home and work (No heavy lifting or running)
- 2) Hamstring strengthening

### Exercises:

- 1) Continue to progress week 6-9 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 (50 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 Gym leg and hip strengthening exercises:
  - Quarter squats: Begin bilaterally and progress to unilateral status, unweighted
  - 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) to weighted hip thrusters

- Gluteus medius strengthening is further progressed to the upright position (hip hiking and multi-hip machine).
  - Patients can begin bilateral and unilateral hip hinge exercises and closed chain press/push activities with light resistance (no barbell) and increase resistance as the surgical hip tolerates.
- 5) Balance and Proprioception (Balance board → foam → dynadiscs)
  - 6) May begin jogging as soon as single leg step down is symmetric and surgical site is non tender to the touch. Not to begin before 12 weeks, more realistic around 14-16 weeks post op

### **Weeks 17-24**

Goal:

- 1) Completion of a functional program for the patient's return to sport activity at 24 weeks.

Exercises:

- 1) Continue to progress week 12 exercises
- 2) Perform advanced proprioceptive training
- 3) Hamstring exercises, such as advanced step downs, double to single-leg Swiss ball hamstring curls, resisted incline hip extensions, RDL's, dead-lifts, Nordic HS curl, and half to full squat progression with progressive load, can gradually be introduced.
- 4) Low level jumping, such as jump rope, step lunges in multiple directions with progression to walking lunges, Bulgarian split squat, can be introduced.
- 5) Patient may begin a light jogging progression
- 6) Return to sporting activities is typically allowed 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) Able to perform a deadlift at 1 x body weight
- 5) Run figure 8 pain free
- 6) 400m run pain free