

## **Proximal Hamstring Rehabilitation Protocol**

### **Phase 1: Immediate Postoperative (Weeks 0-6)**

- **Weight Bearing and Mobility:**
  - Toe-touch or 25% weight bearing is allowed.
  - Utilize crutches with a hip brace locked 0-30 degrees to protect the surgical repair.
- **Activity Restrictions:**
  - Limit trunk movement and excessive hip flexion.
  - No active hamstring exercises permitted.
- **Goals:**
  - Restore basic mobility and independence in daily living tasks (e.g., sitting, standing).

### **Phase 2: Early Rehabilitation (Weeks 6-8)**

- **Increased Mobility:**
  - Gradually transition to full weight bearing as tolerated, weaning off crutches.
- **Exercise Integration:**
  - Light hamstring-strengthening exercises (e.g., standing leg curls).
  - Total leg strengthening exercises introduced, such as heel raises and general hip strengthening.
  - Emphasize dynamic stretches and gentle mobility exercises focusing on achieving full range of motion by the end of week 8.
- **Goals:**
  - Achieve full range of motion of the affected leg.
  - Physical therapy should focus on ensuring the integrity of the surgical repair while gradually increasing exercise intensity.

### **Phase 3: Strengthening and Aerobic Conditioning (Weeks 8-12)**

- **Aerobic Activities:**
  - Initiate low-impact aerobic exercises such as stationary cycling and the Stairmaster.
- **Strengthening Program:**
  - Progress total leg-strengthening exercises, increasing intensity as tolerated, including:
    - Leg presses
    - Squats (as pain allows)
    - Step-ups
  - Introduce progressive resistance training focusing on hamstrings, quadriceps, and hip stabilizers.
- **Goals:**
  - By the end of week 12, patients should perform daily activities without restriction and participate in non-impact aerobic exercise without pain.

### **Phase 4: Return to Sport (Weeks 12-16+)**

- **Functional Testing:**
  - Assess strength, flexibility, and functional performance (e.g., single-leg stance, modified functional movement tasks).

- Consider a return-to-sport test (e.g., hop tests for distance or time).
- **Sport-Specific Strengthening Program:**
  - Progressive sport-specific drills that simulate athletic demands:
    - Plyometric exercises (e.g., jump squats, box jumps) as tolerated.
    - Agility training (e.g., ladder drills, cone drills) emphasizing quick changes of direction.
- **Learn and Implement Strategies:**
  - Focus on proper movement mechanics, particularly in sport-related movements involving running, jumping, and cutting.
- **Goals:**
  - Achieve pre-injury levels of strength, flexibility, and endurance.
  - Prepare the athlete for full participation in sports activities without pain or restriction.
- **Follow-Up:**
  - Regular follow-up with a physical therapist to ensure progress and adjust the program as necessary based on recovery and performance feedback.

### **Conclusion**

This rehabilitation protocol emphasizes a careful, structured approach to recovery from proximal hamstring repair, balancing protection of the surgical site with gradual increases in activity levels. Regular assessments ensure safe progress towards a full return to sport.