Proximal Hamstring Repair Rehab Protocol
Edited: Feb-16

Orthopedic and Sports Medicine Center

Dr Benjamin Petre
Rehab Protocols

AAMC Orthopedic and Sports Medicine Specialists

AAHS Outpatient Physical Therapy Sports Group

Office: (410) 268-8862
Fax: (410) 268-0380
### EXERCISES/METHODS

**BRACING/SLING**
- Brace for 3 weeks at 0-45 degree hip flexion

**ROM RESTRICTIONS**
- 0-45 degrees week 0-3
- 0-90 week 3-6

**WEIGHT BEARING**
- TTWB 20 lbs week 0-4
- Gradual wean to WBAT from weeks 4-6

### TIMELINE

| Early Post-operative Day 1-week 2 | GOALS | PROM of knee and hip begins a wk 0
|----------------------------------|-------|---------------------------------------------
| Protection of the repaired tendon(s) |       | Gentle AROM initiated at wk 4       |
| Pain control                     |       | Calves, Passive stretches at 2 weeks: quad, hip flexor |
| Restore ROM within guidelines    |       | Soft Tissue Massage:                |
| Prevent muscular inhibition and gait abnormalities |       | Scars, TFL / ITB, Quads, Gluteals, QL, |
| Diminish pain and inflammation   |       | Lumbar Paraspinals, posterior thigh, and |
|                                 |       | Calves                               |
|                                 |       | Ankle Pumps, Gluteus squeezes, Quad squeezes, |
|                                 |       | Transverse abdominals, gentle Hip Abd submax |
|                                 |       | isometrics using a belt or Pilates ring, lumbopelvic |
|                                 |       | stabilization, patellar mobilizations |

### GOALS

**Early Post-operative Day 1-week 2**
- Protection of the repaired tendon(s)
- Pain control
- Restore ROM within guidelines
- Prevent muscular inhibition and gait abnormalities
- Diminish pain and inflammation

**Goals/Restrictions/Milestones:**
- Do not progress before week 2
- Able to initiate muscular activation

**Sub-Acute Post-Operative: 2-6 weeks**
- Above +
- Begin AAROM
- Painless PROM to limits
- Restore normal gait pattern (emphasize good leg control with extension of knee during swing phase and heel strike)
- Improve ADL function, ie. sit + stand, stairs, etc.

**Week 3-4**
- Progress PROM 0-45 at the hip
- Initiate AROM at week 4, but no hamstring contraction
- 4 weeks:
  - Prone quad strengthening, sidelying hip add/abd, single and double-limb balance and proprioception, lumbopelvic stabilization (PRE’s)

**Week 5-6**
- Progress PROM at the hip 0-90°
- D/c brace after 6 weeks
- Progress to FWB
- Isometric exercises
- Begin light hamstring strengthening with low loads, high reps and high frequency by performing hamstring leg curls in standing with the hip extended. Start with zero resistance then progress as tolerated 1 lb at a time-2 sets/20, 4-5x/day

**Goals/Restrictions/Milestones:**
- Painless PROM to limits
- 6 weeks
- Full Weightbearing without gait abnormality

**Goals/Restrictions/Milestones:**
- Do not progress before week 2
- Able to initiate muscular activation

**Other Restrictions and Key Considerations**
- Avoid all hamstring stretch
- Must flex knee to flex hip
- Never flex hip + extend knee

---

**The Orthopaedic and Sports Medicine Center LLC.**
Leaders in Specialty Orthopaedic Care
## EXERCISES/METHODS

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Exercises/Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-10 weeks</td>
<td>Moderate Activity: Protection of the repaired tissue, Restore Full Hip ROM, Restore Normal Gait Pattern, Progressive Strengthening of Hip, Pelvis, and LE’s, WALKING TREADMILL USE with appropriate gait pattern</td>
</tr>
</tbody>
</table>

### Precautions:
- No forced (aggressive) stretching of any muscles
- Avoid any terminal ranges of motion in exercise

### Goals/Milestones:
- Full ROM
- Pain free Normal gait pattern
- LE MMT minimum 4/5

### Weeks 10-16

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Exercises/Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Strengthening/Sport</td>
<td>Good control and no pain with functional movements, including step up/down, squat, partial lunge (do not exceed 60° of knee flexion), Avoid dynamic stretching, Avoid loading the hip at deep flexion angles, Can Start Alter G running at 50% or more</td>
</tr>
</tbody>
</table>

### Week 7-8 Ex’
- Isotonic strength training progressed
- Dynamic training advanced
- Isokinetic work and dynamic stretching

### Goals/Restrictions/Milestones:
- Non-impact balance and proprioceptive drills – beginning with double leg and gradually progressing to single leg
- Stationary bike
- Gait training
- Begin hamstring strengthening – start by avoidance of lengthened hamstring position (hip flexion combined with knee extension) by working hip extension and knee flexion moments separately; begin with isometric and concentric strengthening with hamstring sets, heel slides, double leg bridge, standing leg extensions, and physioball curls
- Hip and core strengthening
- Lunges, Side to side lateral slides with cord, Forward / Backward running program, light Plyometrics, and resisted lateral walking
- Progress running
- Sideways agility drills

### MEDITATION:
1. Pain medicine only as needed. Wean off as soon as possible
2. ASA 325mg for 30 days to reduce blood clot risk

---

**SHOWERING**

1. May Shower day 1 after surgery
2. Use Op-Site or similar waterproof dressing, change every other day

**WOUND CARE**

1. Replace waterproof dressing every other day
2. Avoid sitting directly on incision for 2 or more weeks

---

[The Orthopaedic and Sports Medicine Center LLC]
Leaders in Specialty Orthopaedic Care
<table>
<thead>
<tr>
<th>TIMELINE</th>
<th>GOALS</th>
<th>EXERCISES/METHODS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goals/Restrictions/Milestones:</strong></td>
<td></td>
<td><strong>Initiation of dry land jogging</strong></td>
</tr>
<tr>
<td>• Hip strength all 5/5</td>
<td><strong>MMT compared bilaterally at 60°, 120° &amp; 180° (Isokinetic testing if available)</strong></td>
<td></td>
</tr>
<tr>
<td>• HS strength 4+/5</td>
<td>• Sport Specific drill work</td>
<td></td>
</tr>
<tr>
<td>• Cardiovascular endurance nearing pre-injury level</td>
<td>• Z cuts, W cuts, Cariocas</td>
<td></td>
</tr>
<tr>
<td>• Demonstrates proper squat form and pelvic stability with initial agility drills</td>
<td>• Agility drills</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Plyometrics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Gradual return to sport</td>
<td></td>
</tr>
</tbody>
</table>

### RETURN TO PLAY CRITERIA

- Dynamic neuromuscular control with multi-plane activities at high velocity without pain or swelling
- Less than 10% deficit for side to side hamstring comparison on Biodex testing at 60° and 240° per second
- Less than 10% deficit on functional testing profile

### SHOWERING

1. May Shower day 1 after surgery
2. Use Op-Site or similar waterproof dressing, change every other day

### WOUND CARE

1. Replace waterproof dressing every other day
2. Avoid sitting directly on incision for 2 or more weeks

### MEDICATIONS

1. Pain medicine only as needed. Wean off as soon as possible
2. ASA 325mg for 30 days to reduce blood clot risk