Proximal Hamstring Rupture: Physical Therapy Protocol

Phase 1- Immediate Rehabilitation

Goals:
- Protection of the repaired tissue
- Restore ROM within guidelines
- Prevent muscular inhibition and gait abnormalities
- Diminish pain and inflammation

Precautions:
- Patients will be toe-touch weight-bearing for 6-8 weeks post-op
- Do Not Push Through Pain or Pinching, gentle stretching will gain more ROM
- ROM Guidelines:
  - PROM of knee and hip begins at week 2
  - Gentle AROM initiated at week 4

Phase 1: Initial Exercises and Tissue Flexibility

Stretches:
- **NO Hamstring stretches for 6 weeks**
- Calves, Passive stretches at 2 weeks: quad, hip flexor

Soft Tissue Massage:
- Scars, TFL / ITB, Quads, Gluteals, QL, Lumbar Paraspinals, posterior thigh, and Calves

**Week 1-2 Ex’s**
- Ankle Pumps, Gluteus squeezes, Quad squeezes, Transverse abdominals, gentle Hip Abd submax isometrics using a belt or Pilates ring, lumbopelvic stabilization, patellar mobilizations
- At 2 weeks: ankle strengthening, passive calf stretching with 0° hip flexion

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

Week 5-6 Ex’s
Progress PROM at the hip 0-90*
d/c brace after 6 weeks
progress to FWB
Isometric exercises
6 weeks: stationary bike, when obtained 90° hip flexion, supine SLR’s

Phase 2 – Intermediate Rehabilitation

Criteria for progression to Phase 2:
Full Weight Bearing Must Be Achieved Prior To Progressing To Phase 2

Goals:
Protection of the repaired tissue
Restore Full Hip ROM – ROM must come before strengthening
Restore Normal Gait Pattern
Progressive Strengthening of Hip, Pelvis, and LE’s
TREADMILL USE with appropriate gait pattern

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

Phase 2: Intermediate Exercises

Week 6-7 Ex’s
Continue gentle stretches
Normal gait training
Aqua therapy
Isotonic exercises begun with limited ROM
Pelvic floor and core strengthening
Closed chain exercises initiated
ROM exercises
Isotonic strengthening under load
Beginning at 6 weeks and progressing through 12 weeks: WB exercises (mini lunges, side stepping with resistance, mini squats, grapevines, etc) aquatic therapy, hydroworx pool for early return to running
Week 7-8 Ex’s
Isotonic strength training progressed
Dynamic training advanced
Isokinetic work and dynamic stretching

Phase 3 – Advanced Rehabilitation

Criteria for progression to Phase 3:
- Full ROM
- Pain free Normal gait pattern
- LE MMT minimum 4/5

Goals:
- Full Restoration of muscular strength and endurance
- Full Restoration of Pt’s Cardiovascular endurance

Precautions:
- No contact activities
- No forced (aggressive) stretching

Phase 3: Advanced Exercises
8-10 weeks
- Lunges, Side to side lateral slides with cord, Forward / Backward running program, light Plyometrics, and resisted lateral walking
- Progress running
- Sideways agility drills

Phase 4 – High Impact/RTS/RTW:

Criteria for progression to High Impact Training:
- Hip strength all 5-/5
- HS strength 4+/5
- Cardiovascular endurance nearing pre-injury level
- Demonstrates proper squat form and pelvic stability with initial agility drills

Develop customized strengthening and flexibility program based off of Patient’s sport and/or work activities

Phase 4: Sport Specific Training
Initiation of dry land jogging
MMT compared bilaterally at 60°, 120° & 180° (Isokinetic testing if available)
Sport Specific drill work
   Z cuts, W cuts, Cariocas
   Agility drills
   Plyometrics
Gradual return to sport

Return to sporting activities is permissible when isokinetic testing is 80% of the unaffected side, or both 5/5 with all LE MMT's. Similar to an ACL reconstruction, this will typically occur between 6 and 9 months.