

Basin Orthopedic Surgical Specialists

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Proximal Hamstring Repair

PHASE 1 – Immediate Post-operative Phase

Protocol dependent upon amount of detachment/repair. Communicate with MD.

Goals: Educate the patient on precautions to protect repair
Decrease pain and inflammation
Teach proper gait with brace and crutches, or use of scooter

Week 1-2 (Day 1-14)

- Ambulate with 2 crutches (or scooter) with brace at 90 degrees knee flexion
- PROM (slight tissue tension)
 - prone: knee extension and hip ER/IR
 - supine: hip flexion (knee to chest), hip ER/IR, calf stretches
- Exercises: (stay supine – do not long sit to avoid stretch to hamstrings)
 - Isometrics for quads and adductors
 - SAQ
 - SLR flexion to 45 degrees
 - Slide board ab/adduction
 - week 2 add glut sets

Week 3 (2 weeks complete-Day 15-21)

- Ambulate with 2 crutches and brace slacked to 75 degrees knee flexion
- Begin scar massage
- Exercises:
 - SLR ab/adduction
 - Multi-angle quadricep isometrics seated (do not lean forward when seated)
 - Long arc quads to 30 degrees extension (do not lean forward)
 - Weight shifts – 25% weight-bearing

Week 4 (3 weeks complete- Day 22-28)

- Ambulate with 2 crutches and brace slacked to 45 degrees
- Begin aquatic program in chest deep water
- Exercises:
 - Begin SLR hamstring stretches supine
 - Prone passive quadricep stretch (no active hamstring activation)
 - Initiate submax hamstring isometrics at 0 and 30 degrees knee flexion
 - Standing hip flexion with knee flexed
 - Mini-squats
 - Calf Raises

- Increase weight-bearing to 50%

PHASE 2

Goals: Restore normal ROM and Flexibility
Normalize gait
Improve strength

Week 5 (4 weeks complete- Day 29-35)

- Discharge brace per MD approval
- Continue 2 crutches until MD specifies
- Exercises:
 - Stationary bike – no resistance
 - Cone walk with crutches
 - Progress hamstring and hip stretches up to 80-90 degrees of hip flexion

Week 6 (5 weeks complete-Day 36-42)

- Continue with bilateral crutches until MD approval
- Exercises:
 - Prone hip extension and hamstring curl (no weight)/ standing hamstring curl with hip neutral
 - Balance/proprioception exercises with 1 crutch
 - Forward and lateral weight shifts 75%, vary surfaces ie, minitramp, foam...

Week 7 (6 weeks complete- Day 43-49)

- Discharge crutches upon MD approval
- Exercises:
 - Bridges – bilateral on flat surface
 - Unilateral leg press
 - Step up
 - Theraband box drill – for balance (Tband around uninvolved extremity), as well as Tband 4 way involved lower extremity
 - add resistance to bike
 - wall squat (can use physioball behind back)
 - Leg extension machine
 - Walk on treadmill no incline

Week 8 (7 weeks complete- Day 50-56)

- Exercises:
 - Elliptical and treadmill walking
 - Mini-lunges
 - Step down
 - Minisquats on balance apparatus (BOSU, minitramp, wobbleboard)
 - Progress to physioball bridges bilateral Lower extremity, knee straight and knee bent

Week 9 (8 weeks complete- Day 57-63)

- Exercises:
 - Increase resistance of hamstring curls – Cybex/Hammerstrength
 - Treadmill incline walk and backward walk
 - Multiangle Hip machine bilateral lower extremity
 - Lateral and monster walk with band around ankle
 - Elliptical machine forward and backward

Week 10-16 (-Day 64-70)

- Exercises:
 - Stairmaster
 - Jog on minitramp or in place
 - Physioball hamstring curls bilaterally (bridge then flex and extend knees)
 - Lunge matrix
 - Sport cord lunges forward, backward and laterally
 - Theraband "claw" exercise – gradually increase speed
 - Prone hamstring manuals – concentric/eccentric
 - Isokinetic rehab concentric/concentric week 10-12 – depending on size of tear
 - Unilateral squat – cone touches vary height and location : perform knee straight (like dead lift), and knee bent (like minisquat)
 - Step up and lunge – incorporate toe touch to overhead (flex trunk forward as lower down to increase moment arm of glut/hamstrings, then rise to upright)

Week 14-16: (Day 92-112)

Strength Tests:

- Excursion test/functional reach test (measure of eccentric knee control/dynamic balance). Forward and lateral reach on single leg with toe tap. Avg of 3 trials taken to compare side to side for distance (excursion)
- Isokinetic test bilaterally – 120, 180, 300 degrees/second

CRITERIA TO START A RUNNING/AGILITY/PLYOMETRIC PROGRAM

- MMT 5/5, ROM equal to uninvolved side
- Reach/excursion test wthing 75-80% of contralateral lower extremity
- Biodex hamstring and quadricep strength at least 70% of involved side isokinetically
- No pain
- Clearance from MD

Week 14-16:

- Slow jog
- Carioca
- Lateral shuffle
- Progress to butt kicks, skipping, high knee running, sprints forward and backward
- Quick feet
- Zig zag runs
- Hop in place
- Line hops
- Hex jumps

Week 16-20:

- progress running, agility, plyometrics and sports specific drills