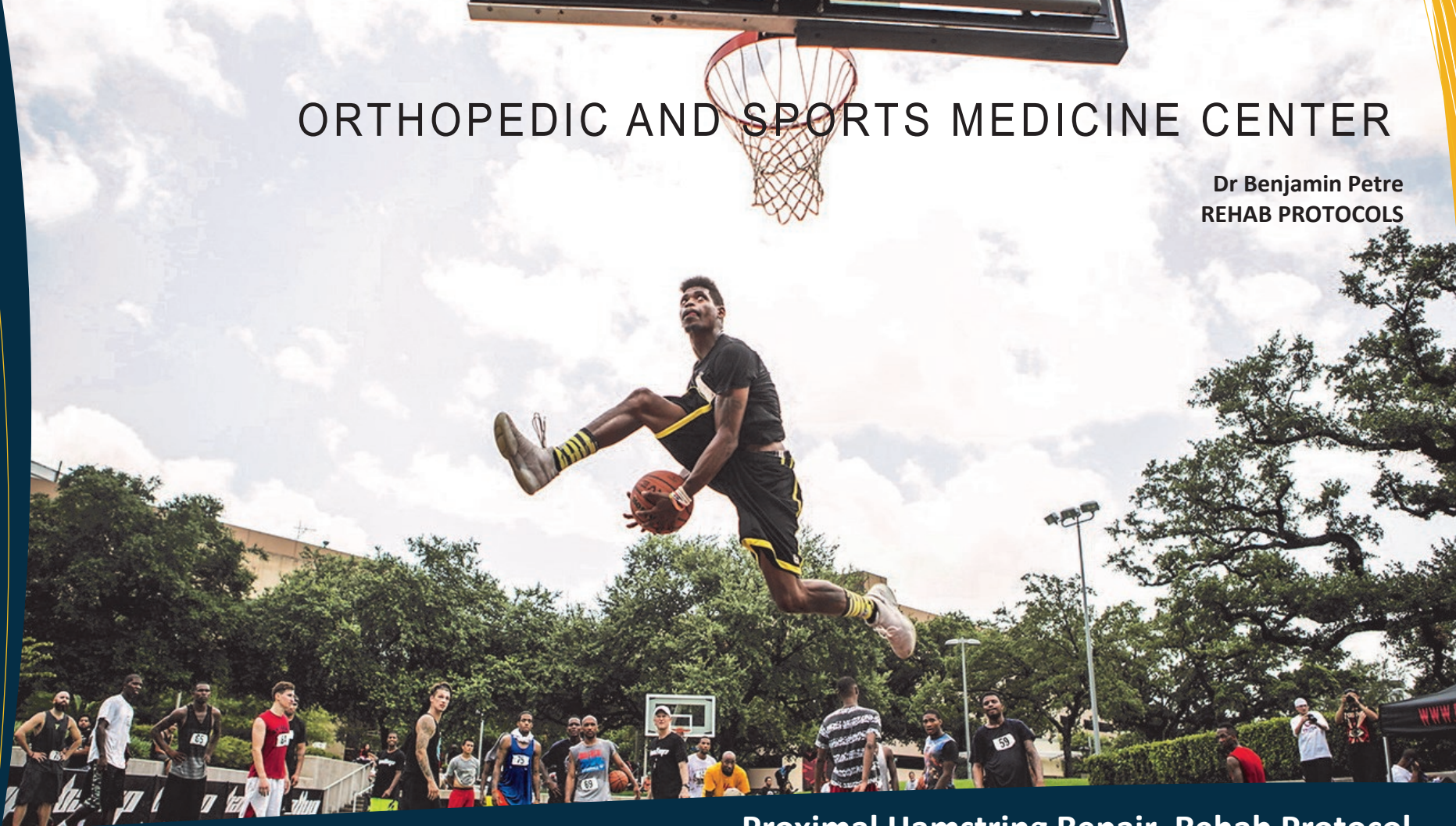


# ORTHOPEDIC AND SPORTS MEDICINE CENTER

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REHAB PROTOCOLS



**Proximal Hamstring Repair Rehab Protocol**

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## TIMELINE

## GOALS

## 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

## OTHER RESTRICTIONS AND KEY CONSIDERATIONS

For first 6 weeks:

- Avoid all hamstring stretch
- Must flex knee to flex hip
- Never flex hip + extend knee

Early Post-operative Day 1-week 2	<ul style="list-style-type: none"> <li>• Protection of the repaired tendon(s)</li> <li>• Pain control</li> <li>• Restore ROM within guidelines</li> <li>• Prevent muscular inhibition and gait abnormalities</li> <li>• Diminish pain and inflammation</li> </ul>	PROM of knee and hip begins a wk 0 Gentle AROM initiated at wk 4 Calves, Passive stretches at 2 weeks: quad, hip flexor Soft Tissue Massage: Scars, TFL / ITB, Quads, Gluteals, QL, 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
<b>Goals/Restrictions/Milestones:</b> <ul style="list-style-type: none"> <li>• Do not progress before week 2</li> <li>• Able to initiate muscular activation</li> </ul>		
Sub-Acute Post-Operative: 2-6 weeks	<ul style="list-style-type: none"> <li>• Above +</li> <li>• Begin AAROM</li> <li>• Painless PROM to limits</li> <li>• Restore normal gait pattern (emphasize good leg control with extension of knee during swing phase and heel strike)</li> <li>• Improve ADL function, ie. sit □ stand, stairs, etc.</li> </ul>	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 abd/add, 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
<b>Goals/Restrictions/Milestones:</b> <ul style="list-style-type: none"> <li>• Painless PROM to limits</li> <li>• 6 weeks</li> <li>• Full Weightbearing without gait abnormality</li> </ul>		

## TIMELINE

## GOALS

## EXERCISES/METHODS

## 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

<p>Moderate Activity: 6-10 weeks</p> <p>Precautions:</p> <ul style="list-style-type: none"> <li>• No forced (aggressive) stretching of any muscles</li> <li>• Avoid any terminal ranges of motion in exercise</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of the repaired tissue</li> <li>• Restore Full Hip ROM – ROM must come before strengthening</li> <li>• Restore Normal Gait Pattern</li> <li>• Progressive Strengthening of Hip, Pelvis, and LE's</li> <li>• WALKING TREADMILL USE with appropriate gait pattern</li> </ul>	<ul style="list-style-type: none"> <li>• stationary bike, when obtained 90° hip flexion, supine SLR's</li> <li>• Aqua therapy</li> <li>• Isotonic exercises begun with limited ROM</li> <li>• Pelvic floor and core strengthening</li> <li>• Closed chain exercises initiated</li> <li>• ROM exercises</li> <li>• Isotonic strengthening under load</li> <li>• 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</li> <li>• Week 7-8 Ex's</li> <li>• Isotonic strength training progressed</li> <li>• Dynamic training advanced</li> <li>• Isokinetic work and dynamic stretching</li> </ul>
<p><b>Goals/Restrictions/Milestones:</b></p> <ul style="list-style-type: none"> <li>• <b>Full ROM</b></li> <li>• <b>Pain free Normal gait pattern</b></li> <li>• <b>LE MMT minimum 4/5</b></li> </ul>		
<p>Weeks 10-16 Light Strengthening/Sport</p>	<ul style="list-style-type: none"> <li>• Good control and no pain with functional movements, including step up/down, squat, partial lunge (do not exceed 60° of knee flexion)</li> <li>• Avoid dynamic stretching</li> <li>• Avoid loading the hip at deep flexion angles</li> <li>• Can Start Alter G running at 50% or more</li> </ul>	<ul style="list-style-type: none"> <li>• Non-impact balance and proprioceptive drills – beginning with double leg and gradually progressing to single leg</li> <li>• Stationary bike</li> <li>• Gait training</li> <li>• 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</li> <li>• Hip and core strengthening</li> <li>• Lunges, Side to side lateral slides with cord, Forward / Backward running program, light Plyometrics, and resisted lateral walking</li> <li>• Progress running</li> <li>• Sideways agility drills</li> </ul>



## TIMELINE

## GOALS

## EXERCISES/METHODS

<b>Goals/Restrictions/Milestones:</b> <ul style="list-style-type: none"><li>• Hip strength all 5-/5</li><li>• HS strength 4+/5</li><li>• Cardiovascular endurance nearing pre-injury level</li><li>• Demonstrates proper squat form and pelvic stability with initial agility drills</li></ul>		
High level Activity: 16+ weeks	Develop customized strengthening and flexibility program based off of Patient's sport and/or work activities	<ul style="list-style-type: none"><li>• Initiation of dry land jogging</li><li>• MMT compared bilaterally at 60°, 120° &amp; 180° (Isokinetic testing if available)</li><li>• Sport Specific drill work</li><li>• Z cuts, W cuts, Cariocas</li><li>• Agility drills</li><li>• Plyometrics</li><li>• Gradual return to sport</li></ul>

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## 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