

Rehabilitation Guidelines Following Proximal Hamstring Primary Repair

PHASE I (surgery to 6 weeks after surgery)

The timeframes for each phase may be extended if the repair is delayed or the injury included other associated injuries (such as a hip adductor tear).

Appointments	<ul style="list-style-type: none"> Rehabilitation appointments begin 2-5 days after surgery and are once every 6-10 days after
Rehabilitation Goals	<ul style="list-style-type: none"> Protection of the repaired tendon(s) Pain control
Weight Bearing	<ul style="list-style-type: none"> Use axillary crutches for up to 6 weeks Post-operative weeks 0-2: Touch down weight bearing Post-operative weeks 3-4: 15% - 40% weight bearing progression Post-operative weeks 5-6: Weight bearing as tolerated with weaning from crutches Full weight bearing occurs at week 6
Hip Brace	<ul style="list-style-type: none"> The use of a brace is determined by the surgeon at the time of surgery, which is based on time of year, timing of surgery and associated injuries
Knee Brace	<ul style="list-style-type: none"> Often a knee immobilizer is used to protect the hamstring repair for 2-4 weeks. Flexion angle will be determined at the time of surgery.
Precautions	<ul style="list-style-type: none"> Avoid hip flexion coupled with knee extension Avoid unsafe surfaces and environments
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> Quad sets Ankle pumps Abdominal isometrics Passive knee range of motion (ROM) with no hip flexion during knee extension Post-operative weeks 3-4: May begin pool walking drills (without hip flexion coupled with knee extension), hip abduction, hip extension, and balance exercises Scar mobilizations
Cardiovascular Exercise	<ul style="list-style-type: none"> Upper body circuit training or upper body ergometer (UBE)
Progression Criteria	<ul style="list-style-type: none"> 6 weeks post-operative

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PHASE II (begin after meeting Phase I criteria, usually 6 weeks after surgery)

Appointments	<ul style="list-style-type: none"> Rehabilitation appointments are once every 1-2 weeks
Rehabilitation Goals	<ul style="list-style-type: none"> Normalize gait Good control and no pain with functional movements, including step up/down, squat, partial lunge (do not exceed 60° of knee flexion)
Precautions	<ul style="list-style-type: none"> Avoid dynamic stretching Avoid loading the hip at deep flexion angles No impact or running
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> 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
Cardiovascular Exercise	<ul style="list-style-type: none"> Upper body circuit training or UBE
Progression Criteria	<ul style="list-style-type: none"> Normal gait on all surfaces Ability to carry out functional movements without unloading the affected leg or pain while demonstrating good control Single leg balance greater than 15 seconds Normal (5/5) hamstring strength in prone with the knee in a position of at least 90° knee flexion

PHASE III (begin after meeting phase II criteria, usually three months after surgery)

Appointments	<ul style="list-style-type: none"> Rehabilitation appointments are once every 1-2 weeks
Rehabilitation Goals	<ul style="list-style-type: none"> Good control and no pain with sport and work specific movements, including impact
Precautions	<ul style="list-style-type: none"> No pain during strength training Post-activity soreness should resolve within 24 hours

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Suggested Therapeutic Exercise	<ul style="list-style-type: none"> • Continue hamstring strengthening – progress toward strengthening in lengthened hamstring positions; begin to incorporate eccentric strengthening with single leg forward leans, single leg bridge lowering, prone foot catches, and assisted Nordic curls • Hip and core strengthening • Impact control exercises beginning 2 feet to 2 feet, progressing from 1 foot to the other and then 1 foot to same foot • Movement control exercise beginning with low velocity, single plane activities and progressing to higher velocity, multi-plane activities • Initiate running drills, but no sprinting until Phase IV
Cardiovascular Exercise	<ul style="list-style-type: none"> • Biking, elliptical machine, Stairmaster, swimming, and deep water running
Progression Criteria	<ul style="list-style-type: none"> • Dynamic neuromuscular control with multi-plane activities at low to medium velocity without pain or swelling • Less than 25% deficit for side to side hamstring comparison on Biodex testing at 60° and 240° per second

PHASE IV (begin after meeting phase III criteria, usually 4-5 months after surgery)

Appointments	<ul style="list-style-type: none"> • Rehabilitation appointments are once every 1-2 weeks
Rehabilitation Goals	<ul style="list-style-type: none"> • Good control and no pain with sport and work specific movements, including impact
Precautions	<ul style="list-style-type: none"> • No pain during the strength training • Post-activity soreness should resolve within 24 hours
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> • Continue hamstring strengthening – progress toward higher velocity strengthening and reaction in lengthened positions, including eccentric strengthening with single leg forward leans with medicine ball, single leg dead lifts with dumbbells, single leg bridge curls on physioball, resisted running foot catches, and Nordic curls • Running and sprinting mechanics and drills • Hip and core strengthening • Impact control exercises beginning 2 feet to 2 feet, progressing from 1 foot to other and then 1 foot to same foot • Movement control exercise beginning with low velocity, single plane activities and progressing to higher velocity, multi-plane activities • Sport/work specific balance and proprioceptive drills • Stretching for patient specific muscle imbalances
Cardiovascular Exercise	<ul style="list-style-type: none"> • Replicate sport or work specific energy demands

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Return to Sport/Work Criteria	<ul style="list-style-type: none">• 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
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These rehabilitation guidelines were developed collaboratively between Marc Sherry, PT, DPT, LAT, CSCS and the UW Health Sports Medicine physician group.