

# Austin Crow MD



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## Proximal Hamstring Repair Protocol

<b>PHASE I (0-6 weeks post-op)</b>	
The timeframe for each phase may change due to delayed healing or other associated injuries (i.e., hip adductor tear)	
Appointments	Rehab appointments begin 3-5 days after surgery. 1-2 x week
Rehabilitation Goals	Protection of the repaired tendon(s) Pain control
Weight Bearing	Toe-touch Weight bearing x 6 weeks
Brace	Locked at 90 degrees flexion
Precautions	Avoid hip flexion coupled with knee extension Avoid unsafe surfaces and environments
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> <li>▪ Quad sets</li> <li>▪ Ankle pumps</li> <li>▪ Abdominal isometrics</li> <li>▪ PROM Knee with NO hip flexion during knee extension</li> <li>▪ PO weeks 3-4: may begin pool walking (with NO hip flexion coupled with knee extension), hip abduction, hip extension and balance exercises</li> <li>▪ Scar mobilizations</li> </ul>
Cardiovascular exercise	Upper body ergometer (UBE) or upper body circuit training
Progression Criteria	6 weeks post-op

<b>PHASE II (6 -12 weeks post-op and having met PHASE I criteria)</b>	
Appointments	Rehab appointments 1-2 x week. Will depend upon patient's progression
Rehabilitation Goals	Normalize gait Good control and no pain with functional movements, including step up/down, squat, partial lunge (do not exceed 60 degrees of knee flexion)
Weight Bearing	Gradually wean from crutches and increase to FWB as tolerated
Brace	Discontinue/wean from brace as tolerated
Precautions	<ul style="list-style-type: none"> <li>▪ Avoid dynamic stretching</li> <li>▪ Avoid loading the hip at deep flexion angles</li> <li>▪ No impact or running activities</li> </ul>
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> <li>▪ Non-impact balance and proprioceptive drills: double leg with gradual progression 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 movements separately; begin with isometric and concentric strength with hamstring sets, heel slides, double leg bridge, standing leg extensions, and physioball curls</li> </ul>
Cardiovascular exercise	Upper body ergometer (UBE) or upper body circuit training
Progression Criteria	<ul style="list-style-type: none"> <li>▪ Normal gait on all surfaces</li> <li>▪ Ability to carry out functional movements without unloading the affected leg or pain while demonstrating good control</li> <li>▪ Single leg balance greater than 15 seconds</li> <li>▪ Normal (5/5) hamstring strength in prone with knee at least 90 degrees of flexion</li> </ul>



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<b>PHASE III (after week 12 and having met Phase II criteria)</b>	
Appointments	Rehab appointments once every 1-2 weeks pending progress and transition to HEP
Rehabilitation Goals	Good control and no pain with sport and work specific movements, including impact activities
Weight Bearing/Brace	FWB with no brace
Precautions	No pain during strength training Post-activity soreness resolves within 24 hours
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> <li>▪ Continue hamstring strengthening with progression in lengthened hamstring positions; begin to incorporate eccentric exercises with single leg forward leans, single leg bridge lowering, prone foot catches and assisted Nordic curls</li> <li>▪ Hip &amp; core strengthening</li> <li>▪ Impact control exercises beginning 2 feet by 2 feet, progressing from one foot to the other, then 1 foot to same foot</li> <li>▪ Movement control exercise beginning with low velocity, single plane activities with progression to higher velocity, multiplane activities</li> <li>▪ Initiate running drills, no sprinting until PHASE IV</li> </ul>
Cardiovascular exercise	Biking, elliptical, Stairmaster, swimming, deep water running
Progression Criteria	<ul style="list-style-type: none"> <li>▪ Dynamic neuromuscular control with multiplane activities at low to medium velocity without pain or swelling</li> <li>▪ Less than 25% deficit for side to side hamstring deficit comparison on Biodex testing at 60 degrees and 240 degrees per second</li> </ul>



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<b>PHASE IV (approx. 4-5 months post-op and after meeting PHASE III criteria)</b>	
Appointments	Rehab appointments once every 1-2 weeks to progress exercises with continuation of HEP
Rehabilitation Goals	Good control and no pain with sport and work specific movements, including impact activities
Precautions	No pain during strength training Post-activity soreness resolves within 24 hours
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> <li>▪ Continue hamstring strengthening with progression toward higher velocity strengthening and reaction in lengthened positions, including eccentric strengthening with SL leans with medicine ball, SL deadlifts with dumbbells, SL bridge curls on physioball, resisted running foot catches, and Nordic curls</li> <li>▪ Hip &amp; core strengthening</li> <li>▪ Impact control exercises beginning 2 feet by 2 feet, progressing from one foot to the other, then 1 foot to same foot</li> <li>▪ Movement control exercise beginning with low velocity, single plane activities with progression to higher velocity, multiplane activities</li> <li>▪ Running and sprinting mechanic and drills</li> <li>▪ Sport/work specific balance and proprioceptive drills</li> <li>▪ Stretching for patient specific muscle imbalances</li> </ul>
Cardiovascular exercise	<ul style="list-style-type: none"> <li>▪ Biking, elliptical, Stairmaster, swimming, deep water running</li> <li>▪ Replicate sport or work specific energy demands</li> </ul>
Return to Work/Sport Criteria	<ul style="list-style-type: none"> <li>▪ Dynamic neuromuscular control with multiplane activities at high velocity without pain or swelling</li> <li>▪ Less than 15% deficit for side to side hamstring deficit comparison on Biodex testing at 60 degrees and 240 degrees per second</li> <li>▪ Less than 10% deficit on functional testing profile</li> </ul>

These rehabilitation guidelines have been adapted from guidelines originally developed between Marc Sherry, PT, DPT, LAT, CSCS and the UW Health Sports Medicine physician group. 2017

