



Hamstring Repair

Post-Operative Rehabilitation Protocol

0-6 weeks

- NWB with crutches and brace x 6-8 weeks
- Brace:
 - Week 0-2: locked at 60°
 - Week 2-4: locked at 40°
 - Week 4-6: locked at 20°
- Precautions
 - **Avoid** hip flexion coupled with knee extension (hamstring stretch)
 - **Avoid** unsafe surfaces and environments
- Suggested Therapeutic Exercises
 - Quad sets
 - Ankle pumps
 - Abdominal isometrics
 - Passive knee range of motion (ROM) with no hip flexion during knee extension
 - Post-operative weeks 3-4: Begin pool walking drills (if incision healed, without hip flexion coupled with knee extension), hip abduction, hip extension, and balance exercises
 - Scar mobilizations
 - Cardiovascular Exercise: Upper body circuit training or upper body ergometer (UBE)

6-12 weeks

- Begin WBAT progression starting at 6 weeks: advance to PWB (25% then 50%) then continue to progress until full WBAT
- Begin weaning off crutches once gait is normalized and non-antalgic
- Rehab Goals:
 - Begin pain-free functional movements
 - Step up/down
 - Squat
 - Partial lunge
 - **Do **NOT** exceed 60° of knee flexion**
- Precautions
 - **Avoid** dynamic stretching
 - **Avoid** loading the hip at deep flexion angles
 - **No** impact or running

Weight Bearing Status

NWB x 6-8 weeks

Post-op Brace

0-2 weeks:
locked at 60°
2-4 weeks:
locked at 40°
4-6 weeks:
locked at 20°

ROM Restrictions

Avoid hip flexion coupled with knee extension



- Suggested Therapeutic Exercises
 - 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:
 - Hamstring sets
 - Heel slides
 - Double leg bridge
 - Standing leg extensions
 - Physioball curls
 - Hip and core strengthening
 - Cardiovascular Exercise: Upper body circuit training or UBE
- Progression Criteria:
 - 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

12-16 weeks

- Rehab Goals:
 - Good control and no pain with sport and work specific movements, including impact
- Precautions
 - No pain during strength training
 - Post-activity soreness should resolve within 24 hours
- Suggested Therapeutic Exercises
 - 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:
 - Biking
 - Elliptical machine
 - Stairmaster
 - Swimming
 - Deep water running
- Progression Criteria:
 - 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
- Plyo Prep Screen prior to initiating running and/or jumping.
Schedule via QR code or spc@rushortho.com

>16 weeks

- Rehab Goals:
 - Good control and no pain with sport and work specific movements, including impact
- Precautions
 - No pain during the strength training
 - Post-activity soreness should resolve within 24 hours
- Suggested Therapeutic Exercises
 - 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
 - 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: Replicate sport or work specific energy demands
 - Return to Sport/Work 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
 - Lower Body Assessment when initiating return to sport progression.
- Schedule via QR code or spc@rushortho.com