



REHAB PROTOCOL HAMSTRING REPAIR

Phase 1 – Immediate Rehabilitation

Goals:

Protect the integrity of repaired tissue

Diminish pain and inflammation

Prevent muscular inhibition

Precautions:

Brace at all times to limit hip flexion

Weight bearing restriction

Criteria for progression to Phase 2:

Proper muscle firing patterns for initial exercises

Do not progress to phase II until full weightbearing is allowed

Phase 2 – Intermediate Rehabilitation (6 weeks post-op)

Criteria for progression to Phase II:

Full weight bearing must be achieved prior to progressing to phase II, including ambulation with low pain levels and minimal gait deviation.

Goals:

Protection of repaired tissue

Restore full hip ROM – **ROM must come before strengthening**

Progressive strengthening of hip, pelvis, and lower extremities

Restore normal gait pattern

Restore muscular strength and endurance

Restore cardiovascular endurance



Precautions:

No forced/aggressive stretching of any muscles

Avoid any terminal ranges of motion during exercises

No contact activities

Weeks 6-10 Exercises:

Stretches as appropriate to maintain ROM/flexibility throughout strengthening, as patients will often tighten as they gain strength

Ankle pumps, glut sets, quad sets, transverse abs isometrics, submax hip ABD isometrics, ankle strengthening, passive calf stretching with 0° hip flexion, clams, sidelying hip abduction, prone quad strengthening, lumbopelvic stabilization, single and double-limb balance and proprioception, TFL/ITB, quads, gluteals, QL, lumbar paraspinals, posterior thigh, and calves

Gait training to normalize mechanics

Beginning at 6 weeks and progressing through 12 weeks: WB exercises (side stepping with resistance, mini squats, grapevines, etc.) aquatic therapy

Week 6:

D/C brace after 6 weeks

May add stationary bike at 6 weeks if patient has achieved 90° hip flexion and can do supine SLRs with minimal/no pain

Supine SLR to 45 degrees hip flexion MAX

Submax hamstring isometrics, multi-angle, avoiding lengthened hamstring position

Supine transverse abs isometrics

Standing calf raises, resistance band TKEs -Treadmill with appropriate gait pattern

Weeks 7-8:

Isotonic strength training progressed

Dynamic training advanced

Isokinetic work and dynamic stretching



Weeks 9-12:

(if LE strength is at least 4/5)

Clamshells

Supine physioball bridge with and without hamstring curl

Closed chain progressions

Resisted lateral walking

Progress to hamstring strengthening in lengthened position

Elliptical, stairmaster

Week 12:

Eccentric HS strengthening

Phase 3 – Advanced Rehabilitation

Criteria for progression to Phase III:

AROM symmetrical to non-operative side

Normalized gait pattern

Hip flexor strength $\geq 4/5$

Hip abduction, adduction, extension, ER and IR strength of $\geq 4+/5$

SLS balance 30 seconds without LOB

Medial tap down without valgus collapse

Goals:

Full (5/5)/Symmetrical muscular strength

Restoration of pre-operative cardiovascular endurance

Precautions:

No contact activities

No stretching into pain or pinch

Use clinical judgement to determine if jump/hop/jog training appropriate for patient lifestyle and goals

Exercises Weeks 12-18:

Squat progression (Functional Test: Star Excursion Balance Test or Single leg squat test)

- Double leg press
- Double leg squat
- Single leg mini squat on total gym with partial weight
- Single leg mini squat in standing
- Lunges in all directions
- Single leg squat within controllable range
- Single leg squat on unstable surface

Jump Progression (Functional Test: 10 sec tuck jump)

- Double leg hop on total gym with partial weight
- Double leg hop on trampoline
- Double leg hop on hard surface
- Double leg vertical jump
- Double leg tuck jump with controlled landing and even weight distribution
- Depth jumps off of block
- Box Jumps with even weight distribution

Hop Progression (Functional Test: Hop tests x 4)

- Single leg hop in place (vertical, forward/backward over line, side to side over line)
- Single leg hop for distance
- Triple hop for distance
- Consecutive single leg forward hops
- Consecutive single leg cross over hops

Jog Progression

Complete the following with good technique and without pain prior to adding jogging:

- Ladder drills (lateral, anterior, z cuts)
- Carioca
- Slide board



- 50% max speed
- full speed
- Elliptical with resistance

Walk to Run Progression

- Phase I: Run 1 minute, Walk 1-5 minutes, Repeat 2x
- Phase II: Run 2 minute, Walk 1-4 minutes, Repeat 2x
- Phase III: Run 3 minute, Walk 1-3 minutes, Repeat 2x
- Phase IV: Run 4 minute, Walk 1-2 minutes, Repeat 2x
- Phase V: Run 5 minute, Walk 1 minutes, Repeat 2x

Complete each phase for 2 days. Do not progress to the next phase if you experience an exacerbation of pain.