

PHYSICAL THERAPY PROTOCOL

Gluteus Medius Repair Rehabilitation

Endoscopic or Open Repair of Gluteus Medius / Minimus Tendon

FOR THE PHYSICAL THERAPIST

Overview and Goals

This protocol governs rehabilitation following gluteus medius (and/or minimus) tendon repair at the greater trochanter. The protocol is driven by tendon-to-bone healing biology, which is the same regardless of surgical approach — rehabilitation is identical for endoscopic and open repairs.^{1,2,3,4} Endoscopic repair is associated with lower complication rates and less soft-tissue dissection, but published outcomes for retear, function, and pain relief are comparable between techniques.^{3,4}

Most gluteus medius repair patients are demographically different — more likely to be women in their 50s–70s with chronic gluteal tendinopathy that has progressed to a partial- or full-thickness tear. Outcomes data reflect this: median time to MCID is approximately 5.7 months and to PASS approximately 11 months.¹¹ Recovery is real and ongoing, but slower than for younger arthroscopic patients — set this expectation early. Patients with partial-thickness tears or significant pre-operative abduction weakness recover more slowly than those with full-thickness tears repaired with stronger tissue.¹¹

Two principles guide rehabilitation. First, protect the tendon-to-bone construct in the early phases through restricted weight-bearing, no active abduction, and avoidance of adduction past midline. Biomechanical data show partial weight-bearing reduces gluteus medius tendon load by approximately 68% compared to full weight-bearing.⁵ Second, stage the reintroduction of abduction loading across multiple phases — active abduction without resistance precedes side-lying abduction against gravity, which precedes resisted abduction. This staging matters more than time alone.

Progression between phases is criterion-based. Time ranges represent typical windows, not gates. Continued progression beyond formal PT discharge is expected and appropriate.

Rehabilitation Phases

PHASE	WEIGHT BEARING	BRACE / PRECAUTIONS	ROM GOALS	EXERCISES	CRITERIA TO ADVANCE
PHASE 1 Weeks 0–6 <i>Tendon protection & passive motion</i>	• Toe-touch weight bearing (TTWB), ~20 lbs, with two crutches for the full 6 weeks. • Partial weight-bearing reduces gluteus medius tendon load by ~68% versus full weight-bearing.⁵	If prescribed: • Hip abduction brace worn during ambulation and at night; removed for hygiene and prescribed exercises. Prevents adduction past midline and protects the repair during early healing. If not prescribed — adduction awareness: • No crossing the operative leg over midline	Pain-free passive ROM within these limits: • Flexion 0–90° • Extension 0° (no hyperextension) • Abduction passive to 20–30° only • No active abduction — protects the repaired tendon • No combined hip flexion + IR + adduction past midline • Avoid passive	Pain & effusion control: • Cryotherapy, scar massage once incisions healed ROM: • Passive ROM within above limits, gentle circumduction, prone-lying soft-tissue mobilization to hip flexors Strengthening (isometrics only — submaximal): • Quadriceps sets, gluteal sets (submaximal) • Hamstring digs with knee support • Ankle pumps, plantarflexion / dorsiflexion • Gentle double-leg bridging (low-demand gluteus medius activation)⁸ Stationary bike: • Initiate week 4 (NOT POD #1 as in other hip protocols) — see “Why the Bike Is Delayed” below.	• Pain controlled at rest and with prescribed exercises • Pain-free passive ROM within phase limits • Quad and gluteal isometric activation symmetric on palpation • Tolerates progression to partial weight bearing • Minimum 6 weeks elapsed

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PHASE	WEIGHT BEARING	BRACE / PRECAUTIONS	ROM GOALS	EXERCISES	CRITERIA TO ADVANCE
		- No side-lying on the operative side - Pillow between the knees when side-lying on the non-operative side	adduction across midline	Avoid: - Active hip abduction in any plane - Active hip flexion / SLR — defers hip flexor tendinopathy² - Joint or capsular mobilization - Stationary bike before week 4 - Side-lying on operative side - Sleeping without a pillow between the knees	
PHASE 2 Weeks 6–12 <i>Early strengthening & gait restoration</i>	- Progress to full weight bearing by week 8, weaning from crutches.¹ - One contralateral crutch may be used until gait is normalized.	- Discontinue brace at week 6 (if prescribed). - Continue patient awareness for adduction limits.	Progress to active-assisted and active hip ROM in all planes. Full ROM expected by 8–10 weeks.	Active hip abduction may begin (no resistance): - Side-lying abduction with wall-sliding (gravity-eliminated) - Standing hip abduction within available range - Resisted hip extension (prone, light resistance) - Stool hip rotations - Continue to AVOID side-lying hip abduction against gravity until week 12 — defer the second mechanical stress on the repair until tendon-bone integration is more advanced. Other strengthening: - Progress double-leg bridges; add resistance-band exercises for hip extensors and external rotators - Core / lumbo-pelvic stabilization: dead bug, bird dog, plank progressions - Quadriceps / hamstring strengthening Aquatic therapy: - Pool walking once incisions fully healed — reduces abduction load while supporting gait and strength.² Cardio: - Stationary bike — progressive resistance Continue to avoid: - Side-lying abduction against gravity - Single-leg stance activities - High-load eccentric abduction - SLR until week 6 (then progress with caution per anterior hip pain)	- Normalized gait without assistive device - Full or near-full active ROM in all planes - Active hip abduction tolerated without pain or compensation - Pain-free with double-leg functional activities
PHASE 3 Weeks 12–16 <i>Progressive strengthening & neuromuscular control</i>	Full weight bearing.	None.	Full active ROM in all planes.	- Side-lying hip abduction against gravity may begin. Progress gradually — start with low repetitions and shorter lever arm (knee bent), advance to full lever arm and added resistance over 2–3 weeks. Strengthening progression: - Single-leg bridges - Side-lying hip abduction with internal rotation (Philippon protocol)³ - Prone heel squeezes - Resisted abduction with elastic bands or cable machines (moderate load)	- Hip abductor strength symmetry approaching 70% - Eliminated Trendelenburg pattern with single-leg stance - Tolerates side-lying abduction against gravity at moderate load without pain - Single-leg balance ≥ 20 sec

PHASE	WEIGHT BEARING	BRACE / PRECAUTIONS	ROM GOALS	EXERCISES	CRITERIA TO ADVANCE
				- Lateral band walks (begin at low resistance) - Gait retraining focused on eliminating the Trendelenburg pattern - Single-leg balance and proprioceptive training initiated Cardio: - Stationary bike with progressive resistance, elliptical trainer, continued aquatic therapy	
PHASE 4 Months 4–6+ <i>Advanced strengthening & return to activity</i>	Full weight bearing.	None.	Full pain-free ROM.	Full strengthening program: - Lateral band walks at progressive resistance - Step-ups, step-downs (forward and lateral) - Lunges in multiple planes - Single-leg squat progression - Continued resisted abduction at progressive load Functional / occupational training: - Activities specific to the patient's goals — household tasks, gardening, walking on uneven terrain, recreational activities Impact loading: - Jogging / running should not begin before 4–6 months, contingent on adequate abductor strength (LSI $\geq$ 80%) and pain-free gait.^{1,9} - Many patients shift toward lower-impact activities (walking, cycling, swimming, elliptical) rather than running — a successful outcome Home program: - Establish home maintenance program for ongoing strength and ROM gains beyond formal PT	<i>See Return-to-Activity Criteria section below.</i> Return to recreational activity typically at 3.5–6 months, with a shift toward lower-impact activities common.⁹

Procedure-Specific Considerations

Why the Bike Is Delayed Until Week 4

Stationary cycling without resistance generates minimal load on the repaired tendon — the issue is the transfer on and off the bike. Mounting and dismounting requires swinging the operative leg over the seat, single-leg loading during transfer, and trunk-and-pelvis movements that combine hip extension, external rotation, and adduction. Early post-op, the patient often cannot do this safely without straining the repair. Delaying bike use until week 4 — when the patient has ~a month of healing, more confident gait, and better proprioception — substantially reduces this transfer risk. This differs from FAI / labral protocols, where the bike is initiated POD #1.

Why Side-Lying Abduction Against Gravity Is Deferred Until Week 12

The gluteus medius repair is staged across multiple loading conditions. Active abduction without resistance (introduced at week 6) tests the repair under low load. Side-lying abduction against gravity adds approximately one limb-weight of load to the abductor moment — the second mechanical “test” of the repair. Deferring it until week 12 allows tendon-bone integration to mature before this loading is introduced.¹

Pre-Operative Weakness & Partial-Thickness Tears Recover More Slowly

Two factors are independently associated with delayed recovery: preoperative hip abduction weakness and partial-thickness tears.¹¹ Patients with these features may require a more measured progression and a longer overall timeline. Do not interpret slower-than-expected progress as protocol failure — recalibrate expectations, slow the progression where indicated, and contact Dr. Roth's office if progress plateaus for more than 4 weeks.

No Joint or Capsular Mobilization Through Phase 2

The repair construct is healing throughout the first 12 weeks and does not benefit from manual mobilization in this window. Soft-tissue mobilization — scar massage and gentle work to hip flexors and surrounding musculature — is permissible and often helpful. Joint and capsular mobilizations should be avoided until Phase 3.

WHEN FORMAL PT ADDS THE MOST VALUE

A 2025 cohort study found the greatest functional gains occurred in the first 21 PT sessions and the first 81 postoperative days, with continued meaningful gains through 1 year; patients completing 3–6 months of PT showed superior 2-year outcomes (HOS-ADL, VAS-Pain) versus those with less than 3 months.¹⁰ Formal supervised PT is most beneficial for:

- The first 12 weeks for protected ROM, gait restoration, and staged abduction reintroduction
- Patients with significant pre-operative weakness or partial-thickness tears
- Patients with persistent gait deviations, Trendelenburg sign, or functional limitations

Patients without complications often transition to a structured home program by months 4–6 with periodic check-ins.

Return-to-Activity Criteria

Return to activity after gluteus medius repair is criterion-based, with functional performance — not strict strength symmetry — as the primary clearance metric. This population is generally older and less athletic than FAI / labral arthroscopy patients; the goal is functional restoration for daily activities and chosen recreational pursuits, not necessarily return to high-impact sport.

Most patients return to recreational activity at 3.5–6 months, with a common shift toward lower-impact activities (walking, cycling, swimming, elliptical) rather than impact loading.⁹ This shift is a successful outcome, not a failure of rehabilitation. Higher-impact activity — running, jumping — should not begin before 4–6 months and only when LSI $\geq$ 80% and gait is consistently pain-free without a Trendelenburg pattern.¹

Domain	Criterion
Pain & symptoms	No pain with target activities at progressive intensity; no night pain on the operative side
Range of motion	Full active ROM in all planes; pain-free
Abductor strength	LSI $\geq$ 80% on side-lying or hand-held dynamometer testing
Gait	Pain-free walking without assistive device; no Trendelenburg sign with single-leg stance
Functional tasks	Step-ups, lunges, single-leg stance $\geq$ 30 sec, and lateral band walks at moderate resistance — all without pain or compensation

Domain	Criterion
Time — recreational activity	Typically 3.5–6 months; shift toward lower-impact activities common and successful ³
Time — higher-impact (running, jumping)	Not before 4–6 months; LSI ≥ 80% and pain-free gait required ⁴

REALISTIC EXPECTATIONS BEYOND FORMAL PT

Clinically meaningful improvement is achieved at a median of 5.7 months; the threshold for patient-acceptable symptom state is closer to 11 months.¹¹ Counsel patients that recovery is real and ongoing well beyond the formal PT window, and that gradual improvement through the first year is expected. Plateau or regression after 4 weeks of consistent home-program adherence should prompt re-evaluation by Dr. Roth.

References

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Glossary

FWB — Full weight-bearing.

HOS — Hip Outcome Score; a validated patient-reported outcome measure with ADL and Sports subscales.

IR — Internal rotation.

LSI — Limb Symmetry Index; the operative limb's strength or performance as a percentage of the contralateral limb (operative ÷ contralateral × 100).

MCID — Minimal clinically important difference; the smallest change in an outcome score that patients perceive as meaningful.

PASS — Patient-acceptable symptom state; the symptom level at which a patient considers themselves well.

PWB — Partial weight-bearing; the patient loads the operative limb to a specified portion of body weight, typically with crutch support.

ROM — Range of motion.

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SLR — Straight leg raise; active hip flexion with the knee extended.

TTWB — Toe-touch weight-bearing; the operative foot may rest on the floor for balance, but no body weight is loaded through it.

VAS — Visual analog scale; a patient-reported pain rating.



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