

Gluteus Medius Repair/Trochanteric Bursectomy

Accelerated Rehab Protocol

Phase 1 (Weeks 0-4) Max protection phase; post op until cleared to begin WB progression by MD

Goals	<ul style="list-style-type: none"> • Protection of tendon repair, follow conservative vs accelerated protocol per MD orders • Pain and edema control • Normalize gait pattern while using brace; crutches • Begin to normalize regional muscle activation; range of motion
Precautions	<ul style="list-style-type: none"> • Weight Bearing (WB): 20 lbs WB x4 weeks • NO active abduction/internal rotation x6 weeks • NO passive external rotation, adduction past neutral x6 weeks • Brace worn when out of bed • Monitor for symptoms of hip flexor tendinitis, synovitis • Monitor for symptoms or history pelvic floor dysfunction <ul style="list-style-type: none"> ○ <i>Increased urinary frequency (>once/2 hours daily), stress or urge incontinence, buttock/coccygeal/ischial tuberosity pain that does not improve with standard orthopedic physical therapy approach</i>
ROM/Manual Therapy	<ul style="list-style-type: none"> • Pain free physical therapist (PT) and partner assisted PROM <ul style="list-style-type: none"> ○ Flexion limited to 90 degrees, abduction to tolerance ○ NO active abduction; internal rotation (IR) ○ NO passive ER, adduction past neutral to not stress the repair • Scar tissue, surgical incision management to prevent adhesions • Retrograde massage, regional soft tissue mobilization as needed • Prone lumbar mobilizations as needed
Motor Control/ Neuromuscular Re-education	<ul style="list-style-type: none"> • 0-2 weeks <ul style="list-style-type: none"> ○ Pelvic tilts, hamstring/adduction isometrics, diaphragmatic breathing ○ Gluteus maximus progression in prone, supine ○ At 2 weeks: initiate ER/extension/Adduction isos at 50% max effort ○ MUST be pain free at surgical site • 3-4 weeks post op <ul style="list-style-type: none"> ○ Initiate supine marching progression if patient has no history of hip flexor tendinitis ○ Prone rhythmic stabilization for ER/IR, beginning at 25% max effort <ul style="list-style-type: none"> ▪ Patient will be prone with knee bent to 90 degrees, manual cues for IR/ER applied at the ankle
Therapeutic Exercise	<ul style="list-style-type: none"> • Week 2 upright stationary bike within range of motion limitations x20 min daily <ul style="list-style-type: none"> ○ Patients may complete this training 2x daily if tolerable • Prone lying if required for hip flexor lengthening • 3-4 weeks: quadruped rocking to 90, cat camels • Week 3-4: quadruped and standing hip extension, stance on non-operative limb <ul style="list-style-type: none"> ○ Standing knee flexion/hip flexion, stance on non-operative limb
Criteria for progression	<ul style="list-style-type: none"> • Normalized gait pattern within WB precautions, with AD • Pain free PROM within limitations of the protocol

Phase 2 (Weeks 4-8) Basic activation and motor control phase

Goals	<ul style="list-style-type: none"> • Successfully wean from assistive devices, brace • Pain free ADL function; normalized DL tasks in small range • Full passive ROM
Precautions	<ul style="list-style-type: none"> • Continue to monitor for symptoms of hip flexor tendinitis, trochanteric pain, synovitis, or pelvic floor dysfunction • Monitor for increased pain with ADLs, regress as indicated • No single leg strength/high level impact act this time
Weight Bearing Progression	<ul style="list-style-type: none"> • Will take at approximately 7 days, progress per pain tolerance/soreness rules • Pool walking highly encouraged, no side stepping! • After 4 weeks, progress to WBAT with assistive device and 1 crutch for short distances. After 2-3 days, 1 crutch in public, none at home. After another 2-3 days, FWB in all settings <ul style="list-style-type: none"> ○ Please leave this up to your discretion as the treating therapist ○ Based on patient tolerance vs timelines at this point!
ROM/Manual Therapy	<ul style="list-style-type: none"> • Progress PROM as tolerated. Add passive hip ER/IR. Avoid extreme combined ROM or pain • Continue with scar tissue/soft tissue mobilization as indicated • Begin joint mobilizations of the hip as indicated <ul style="list-style-type: none"> ○ i.e. Hip inferior/lateral mobilizations, prone PA mobilizations
Motor Control/ Neuromuscular Re-education	<ul style="list-style-type: none"> • Quadruped and tall kneeling rhythmic stabilization of hip deep rotators, core musculature • Begin quadruped hip extension, standing hip extension with stance on non-operative limb <ul style="list-style-type: none"> ○ Progress to birddog exercise as tolerated by patient symptoms • Continue with light lumbopelvic strengthening • Continue with hip flexor progression per patient tolerance (see appendix) • Week 4-6 Kneeling front planks <ul style="list-style-type: none"> ○ NO side planks at this time due to high levels of gluteus medius activation ○ Progress to full planks at week 8 post op • Week 6-8: begin gluteus medius isometrics with 10% MVC. Must be Pain free, progress to 50% MVC as tolerated <ul style="list-style-type: none"> ○ Begin in hooklying positions before completed against gravity (clam position) ○ NO long lever hip abduction isometrics at this point • Double leg balance tasks (i.e. Balance board tasks), split stance balance tasks
Therapeutic Exercise	<ul style="list-style-type: none"> • Continued quadruped rocking exercises • Continued cardiovascular program via biking, initiate pool walking as indicated • Standing hip flexion/extension, calf raises, HS curls with operative limb • Leg press or double leg squats within tolerance <ul style="list-style-type: none"> ○ Smaller range squats will have less demand on gluteus medius, begin with ¼ to ½ depth and progress over the course of 2-3 weeks • Week 6+ double leg hip hinges progressing to kickstand deadlift positions
Criteria for progression	<ul style="list-style-type: none"> • Pain free, symmetrical passive range of motion and joint mobility • Normalized gait pattern, no pain or Trendelenberg gait pattern • Pain free performance of ADLs

Phase 3 (Weeks 8-12) Beginning strength phase

Goals	<ul style="list-style-type: none"> • Continue to progress lumbopelvic and gluteal strength without pain • Increase tolerance to strength and endurance based tasks
Precautions	<ul style="list-style-type: none"> • Continue to monitor for symptoms of hip flexor tendinitis, trochanteric pain, synovitis, or pelvic floor dysfunction • NO single leg strength/high level impact act this time
Manual Therapy	<ul style="list-style-type: none"> • Achieve and maintain full, multiplanar range of motion and lumbopelvic joint mobility <ul style="list-style-type: none"> ○ Joint mobilizations, soft tissue mobilizations, dry needling as needed/determined by physical therapist • Consider consult with pelvic floor therapist if indicated
Motor Control/ Neuromuscular Re-education	<ul style="list-style-type: none"> • Continue with gluteus medius isometrics <ul style="list-style-type: none"> ○ Week 10+ progress to standing gluteal isometrics in small range, standing on non-operative limb, progress to standing on operative limb • Week 10: begin single limb bridges in small range if pain free. • Continue with double leg and split stance balance and strength tasks, progressing to kickstand positions at week 10. Must be pain free! <ul style="list-style-type: none"> ○ Week 8+ kickstand hip hinges progressing to kickstand deadlift positions
Therapeutic Exercise	<ul style="list-style-type: none"> • Cardiovascular training: continue biking • Continue with core progression as indicated, please continue to hold on side planks due to repair size • Continue with quadruped birddogs, add single leg bridges • Week 8+ forward step ups, progressing to lateral step ups at week 10+ • Initiate pelvic drops in small range at weeks 10-12+. This is a higher demand gluteus medius exercise and must be pain free! • Week 10+ multi-angle clams, begin in larger degree of hip flexion (60 degrees), progressing to neutral hip positioning • Add reverse lunges, operative limb trailing and progress to operative limb forward by week 10 if pain free. Add side lunges at week 12+ if pain free <ul style="list-style-type: none"> ○ TRX assistance highly encouraged
Criteria for progression	<ul style="list-style-type: none"> • Walk 1 mile without insertional pain, Trendelenberg gait pattern • Complete all strength training tasks without pain

Phase 4 (Week 12-16): Continued Strengthening to Progressive Overload

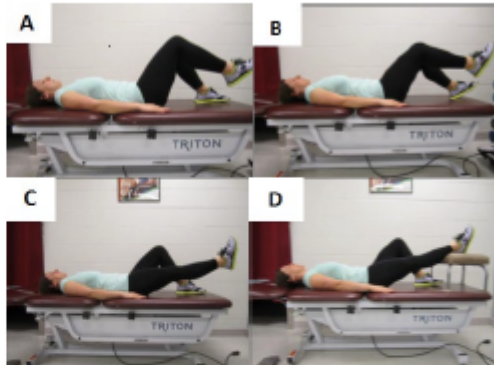
Goals	<ul style="list-style-type: none"> Continue to build strength, progressing into single leg positions
Precautions	<ul style="list-style-type: none"> Continue to monitor for symptoms of hip flexor tendinitis, trochanteric pain, synovitis, or pelvic floor dysfunction NO plyometric tasks without passive testing as listed
Manual Therapy	<ul style="list-style-type: none"> Maintain full, multiplanar range of motion and lumbopelvic joint mobility <ul style="list-style-type: none"> Joint mobilizations, soft tissue mobilizations, dry needling as needed/determined by physical therapist
Therapeutic exercise Neuromuscular Re-education	<ul style="list-style-type: none"> Progressive hip ROM and stretching as indicated Progressive LE and core strengthening <ul style="list-style-type: none"> May initiate higher level tasks including single leg deadlifts May initiate small range, kickstand pistol squats, progressing to single leg squats at week 14+. Initiate single leg squats with TRX support Week 12+: begin kneeling side planks if pain free <ul style="list-style-type: none"> Week 12: operative limb raised, Week 14: operative limb down Increase dynamic balance demand as tolerated Cardiovascular training: begin elliptical as tolerated/desired
Criteria for progression	<ul style="list-style-type: none"> Pass step down test (see appendix) with <2 errors

Phase 5 (Week 16-20+): Continued, high level strength training progressing to discharge

Goals	<ul style="list-style-type: none"> Continue to build strength in single leg positions Initiate running progression if this is a goal
Precautions	<ul style="list-style-type: none"> Continue to monitor for symptoms of hip flexor tendinitis, trochanteric pain, etc
Manual Therapy	<ul style="list-style-type: none"> Maintain full, multiplanar range of motion and lumbopelvic joint mobility
Therapeutic exercise Neuromuscular Re-education	<ul style="list-style-type: none"> Begin side steps week 16+, progressing to resisted side steps Continue single limb strengthening Increase dynamic balance demand as tolerated Dynamic lunges: forward, lateral, curtsy lunges in small range Cardiovascular training: begin running once patient passes y-balance/step down tests
Criteria for progression	<ul style="list-style-type: none"> Criteria for discharge <ul style="list-style-type: none"> Pass y-balance test Return to high level tasks per patient goals without pain

Psoas progression/marching progression

Clinicians may choose either of the two iliopsoas strengthening progressions based on clinician/patient preference. All exercises are performed with simultaneous abdominal drawing in maneuver and lumbar spine in neutral alignment.



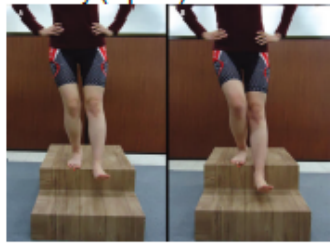
A) Supine short-lever hip flexion	A) Marching
B) Seated hip flexion	B) Walk Out
C) Seated hip flexion on Swiss ball	C) Heel Slide
D) Standing hip flexion with theraband resistance	D) Heel Slide with SLR

Tyler TF, Fukunaga T, Gellert J. Rehabilitation of soft tissue injuries of the hip and pelvis. *Int J Sports Phys Ther.* 2014;9(6):785-797.

Dewitt, JD. Non-surgical/post-op management. Presented at: APTA's NEXT Conference & Exposition; June 5, 2015; National Harbor, MD.

Forward Step Down Test

Definition of errors	Interpretation of errors	
Arm strategy: subject uses an arm strategy in an attempt to recover balance (1 point) Trunk movement: trunk leans right or left (1 point) Pelvic plane: pelvis rotates or elevates on one side compared to the other (1 point) Knee position: knee deviates medially and the tibial tuberosity crosses an imaginary vertical line over 2 nd toe (1 point); knee deviates medially and the tibial tuberosity crosses an imaginary vertical line over medial boarder of the foot (2 points) Balance: subject steps down on the uninvolved side or the subject's tested leg becomes unsteady (1 point)	0-1 errors	Good quality mechanics
	2-3 errors	Medium quality mechanics
	4+ errors	Poor quality mechanics



Park K, Cynn H, Choung S. Musculoskeletal predictors of movement quality for the forward step-down test in asymptomatic women. *J Orthop Sports Phys Ther.* 2013;43(7):504-510.