

BENJAMIN G. DOMB, MD

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Physical Therapy Protocol Partial or full thickness gluteus medius repair with or without labral repair

The intent of this protocol is to provide guidelines for your patient's therapy progression. It is not intended to serve as a recipe for treatment. We request that the PT/PTA/ATC should use appropriate clinical decision making skills when progressing a patient. The exercises listed are not all inclusive, you can modify exercises as long as you maintain the appropriate precautions. **Please obtain documentation of the exact procedure that was performed from our office.** Please contact Dr. Domb if there are any questions about the protocol or your patient's progression

Please keep in mind common problems that may arise following hip arthroscopy: Hip flexor tendonitis, adductor tendonitis, sciatica/piriformis syndrome, ilial upslips and rotations, LB pain from QL hypertonicity and segmental vertebral rotational lesions. If you encounter any of these problems, please evaluate, assess and treat as you feel appropriate maintaining Dr. Domb's precautions and guidelines at all times. Gradual progression is essential to avoid flare-ups. If a flare-up occurs, back off with therapeutic exercises until it subsides.

Please reference the exercise progression sheet for timelines and use the following precautions during your treatments. Thank you for progressing all patients appropriately and please fax all progress notes to Dr. Domb's office or hand deliver the patient. Successful treatment requires a team approach. Please contact Dr. Domb at any time with your input on how to improve the therapy protocol.

General Guidelines/Precautions following surgery

- Weight bearing: Partial-thickness tear: 2 crutches, 20 pounds weight bearing for the first 6 weeks postoperatively
Full-thickness tear: 2 crutches, 20 pounds weight bearing for the first 8 weeks postoperatively
- ROM: **NO Active** hip abduction and IR and **NO Passive** hip ER and adduction for the first 6 weeks postoperatively
- Do not push through pain or pinching, gentle stretching will gain more ROM.
- Use Continuous Passive Motion (CPM) 4 hours/day or stationary bike on zero resistance 2 hours/day ONLY for patients who have also had an arthroscopic procedure inside the hip joint
- Manage scarring around portal sites
- General precautions: Hip flexor tendonitis, Trochanteric bursitis, synovitis, scar tissue around portals
- Therapy should begin 6 weeks post-op**

Weeks 6-8 postop

- CPM for 4 hours/day or upright bike (no resistance) for 2 hours/day for patients who have had gluteus medius repair AND arthroscopy inside the hip joint
- ROM: **PROM hip IR; AAROM: hip ER, abduction, adduction; AROM: hip flexion, extension**
- Upright bike: NO RESISTANCE (must be painfree, begin ½ circles, progress to full circles)
- Soft tissue mobilization: Gentle to scar and hip flexor, ITB
- Gait training: Weight bearing as tolerated for partial-thickness gluteus medius tears
20 pound weight bearing for full-thickness gluteus medius tears
- Strength:
 - Hip isometrics (Begin at 6 weeks): extension, adduction
(Begin at 8 weeks): sub max pain free hip flexion
 - Quad sets, Hamstring sets, Lower abdominal activation
- Modalities for pain control, swelling

Weeks 8-10 postop

- Continue with previous exercises
- Gait training: Weight bearing as tolerated, work on symmetry
- ROM: **progress A/PROM in all directions**
- Upright bike: progress resistance as tolerated
- Soft tissue massage: PRN (scar, iliopsoas, TFL, ITB, piriformis, QL, lumbar paraspinals, hip adductors)
- Strength
 - Hip abduction: Isometrics to isotonic (see addendum for progression)
 - Progress isometric resistance
 - Quad and hamstring isotonic exercise
 - Quadruped rocking
- Stretching
 - Manual hip flexor stretching (gentle, no pain)

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- Modified Thomas position, or pillows under buttock
- Modalities for pain control, swelling

Weeks 10-12 postop

- Gait: Work on symmetry
- Continue with previous exercises
- ROM: progress A/PROM in all directions
- Soft tissue massage: PRN (scar, iliopsoas, TFL, ITB, piriformis, QL, paraspinals, hip adductors, gluteus medius)
- Strength
 - Progress core strengthening
 - Initiate hip flexion and extension strengthening progression (see addendum)
 - Hip IR/ER using stool under knee (make sure to hold onto object for support).
 - Upright bike with resistance
 - Begin Elliptical training
- Stretching: Manual and self hip flexor stretching
- Modalities for pain control, swelling

Weeks 12-14 postop

- Gait: Normalize without AD
- ROM: progress A/PROM all directions
- Soft tissue massage: PRN (scar, iliopsoas, TFL, ITB, piriformis, QL, paraspinals, hip adductors, gluteus medius)
- Strength
 - Progress LE and core strength and endurance as able
 - Begin proprioception/balance activity (2 legs to 1 leg, stable to unstable)
 - Begin closed chain strengthening such as leg press
 - Side stepping with theraband
 - Single leg squats, step-ups, lunges
- Stretching: Manual and self hip flexor stretching
- Modalities for pain control, swelling

Weeks 14-16 postop

- Gait: Normalize without AD
- ROM: progress A/PROM all directions
- Soft tissue massage: PRN (scar, iliopsoas, TFL, ITB, piriformis, QL, paraspinals, hip adductors, gluteus medius)
- Strength:
 - Progress LE and core strengthening
 - Increased emphasis on single leg strength moves
 - Unilateral leg press, hip hikes, eccentric step downs
 - Progress balance and proprioception
- Stretching: Manual and self (hip flexor, hip adductors, glute, piriformis, TFL, ITB)

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Weeks 16-18 postop (Advanced Rehabilitation)

Criteria for progression to this level

- Full ROM
- Painfree, normal gait pattern
- Hip flexor strength 4/5 or better
- Hip abd, add, ext and IR/ER strength of 4+/5 or better

-Strength:

- Progress core, hip, LE strength and endurance
- Lunges (multi angle)
- Plyometric progression (Must have good control with all exercises first)
- Forward/Backward running program (Must have good control with all exercises first)
- Agility drills (Must have good control with all exercises first)

-Stretching: Progress self and manual stretches

PRECAUTIONS

- No contact activities until cleared by MD
- No forced (aggressive) stretching

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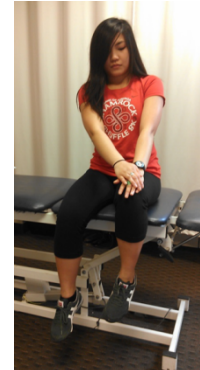
Exercise Addendum:

Below is a list of exercises with ideal progressions. It is recommended to begin with the first exercise listed, least difficult/resistance, and progress down the list towards highest difficulty/increased resistance when appropriate. Be sure to differentiate between pain and muscular soreness. Pain should be avoided during progression of exercises.

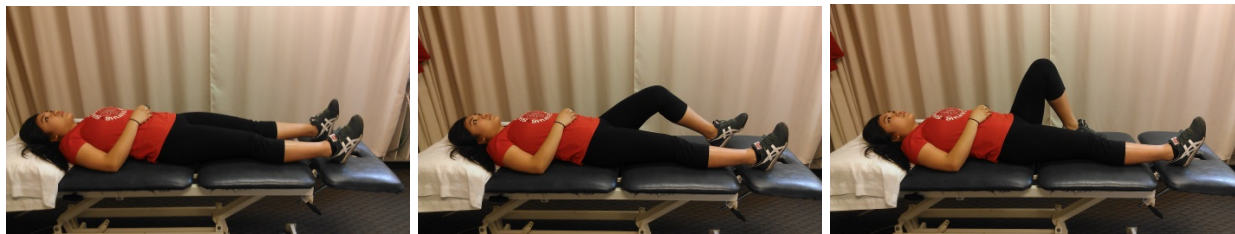
1. Hip flexion:

A. Seated isometric with manual resistance:

Patient is seated at edge of plinth. Therapist or patient provides manual resistance through thigh, while the patient simultaneously pushes upward into the resistance. This may need to be started with less than 100% intensity. Hold for 5-10 seconds and then relax.

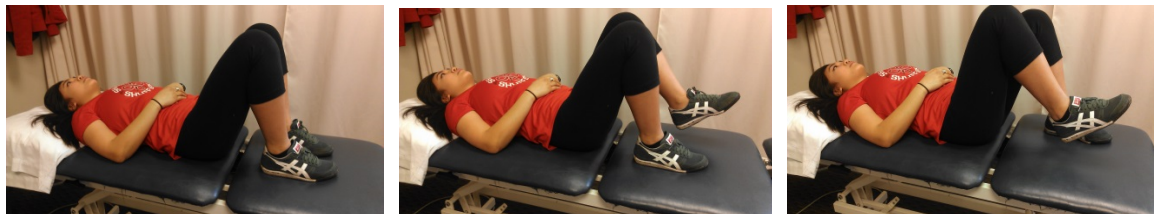


B. Supine heel slide:



Patient lies on back with legs extended. The patient activates core musculature to keep spine in neutral, and slowly slides involved heel towards buttocks. The patient returns to starting position while keeping abdominals contracted and low back flat on the table. This can be made harder by performing with shoe on for some resistance.

C. Supine march:



Patient lies on back in hook-lying position. The patient activates core musculature to keep spine in neutral. The patient slowly lifts one leg at a time 2-3 inches off table, and then slow returns to starting position keeping back and pelvis still. Then alternate to the other leg as if marching in place.

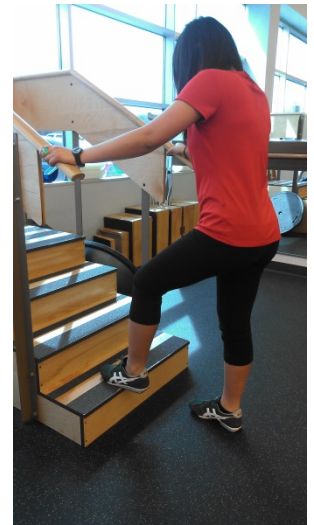
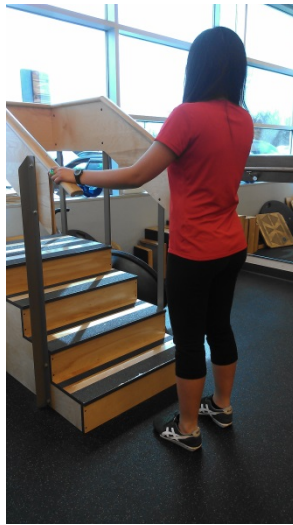
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D. Standing step taps:

Patient stands facing step and engages core musculature. Then patient lifts involved LE to tap stair. Return LE to starting position. Begin with 2 inch stair and increase height gradually as strength improves. Encourage performance without use of UEs for support, unless needed to prevent LOB.

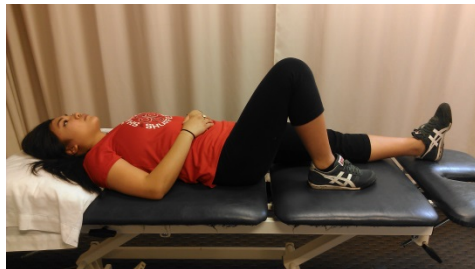


E. Standing march:



Patient stands with core musculature activated. The patient raises involved hip to 90 degree angle, allowing bend in the knee. Return to starting position. Then alternate to the other leg as if marching in place. Encourage performance without use of UEs for support, unless needed to prevent LOB.

F. Straight leg raise:



Patient lies on back with uninvolved knee bent in hook-lying position. The involved thigh is tightened, and the leg is raised 8-10 inches off table. Return to starting position, maintaining contraction at thigh. Do not perform if there is a lag in knee extension or pain in the anterior hip.

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2. Hip abduction:

A. *Supine and seated isometric:*



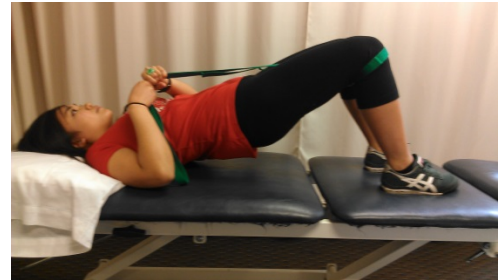
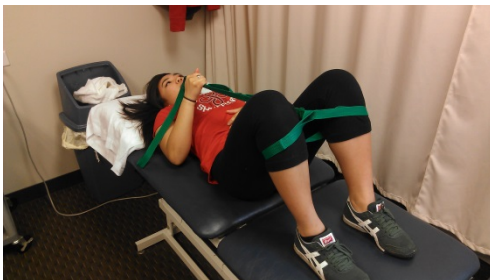
Patient lies on back in hook-lying position or sitting. Position belt around the knees, or may use manual resistance, if available. The patient presses knees outward into belt or therapist's hand. Hold for 5-10 seconds and then relax. Modification – may be performed with involved LE bent against wall with pillow, and pressing knee/lower thigh outward into pillow/wall.

B. *Standing hip abduction:*

Patient stands with surface in front for UE to prevent loss of balance. Then bring LE out to the side, away from body, keeping the trunk vertical while avoiding leaning. Perform on one side and then switch and perform on the other leg.



C. *Isometric hip abduction with bridging:*



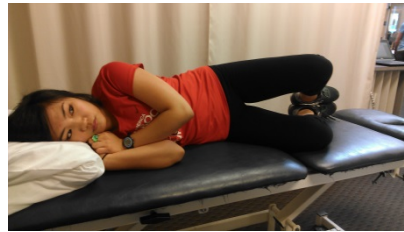
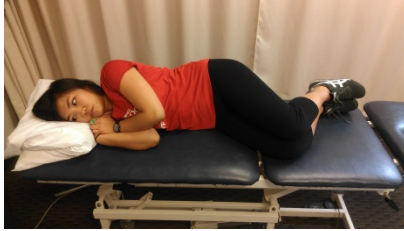
Perform supine isometric as described above, with use of Theraband or Pilates ring as form of resistance. While maintaining this contraction, the patient raises hips up from table and the return to starting position. Start with slow repetitions and progress to hold for 3-5 seconds. (Pt must perform 3B and 3C without compensation before this can be added.)

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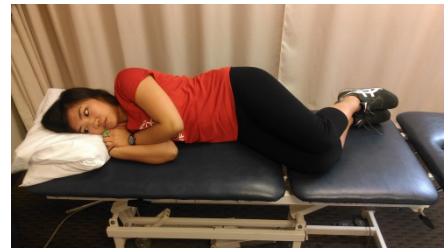
D. Side-lying clam shell:



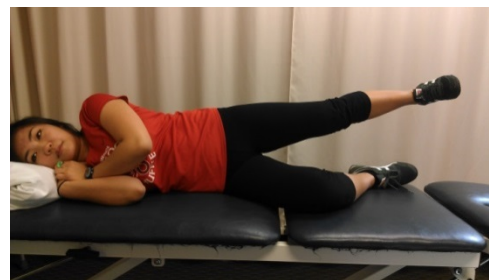
Patient lies on side with knees bent. The patient is instructed to contract core musculature and pull belly button towards spine. Then, keeping ankles together and spine still, the patient raises the top knee. Perform first without resistance and then add Theraband as able.

E. Side-lying bent knee hip abduction

Patient lies on side with knees bent same start position as Side-Lying Clam Shell. Then keeping both knees bent at 90°, tighten the muscles of the core and the top leg. Raise the top leg, and be sure not to rotate at the hip. When lowering the leg, the knee and foot/ankle should make contact with the lower leg at the same time. Perform first without resistance and then add Theraband to increase difficulty.



F. Side lying hip abduction



Patient is instructed to lay on side with bottom knee bent for stabilization. Then tighten the muscles on front of the top thigh keeping it straight. Lift the top leg, being sure not to turn foot up towards ceiling. Make sure the leg moves in a straight vertical motion and the pelvis does not rotate. Perform first without resistance, then add Theraband or ankle weights to increase difficulty.

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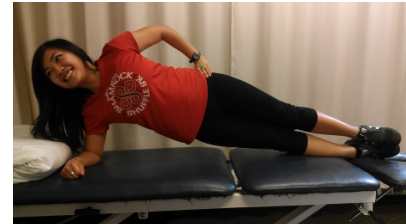
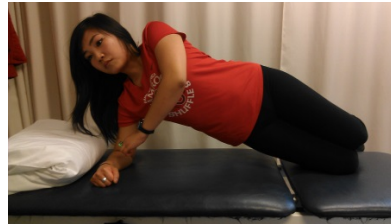
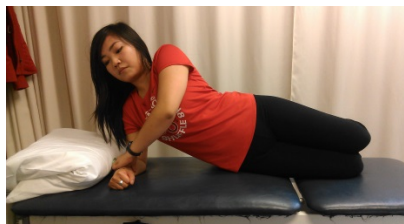
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G. Crab Walk



Patient stands with knees slightly bent and then is instructed to step to the side while keeping toes pointing forward. The patient will step to the side with one foot first, then together with the other. This is to be done for roughly 30-45 feet and then without turning around return to the other direction. Perform first without resistance, then add Theraband to increase difficulty.

H. Side Plank

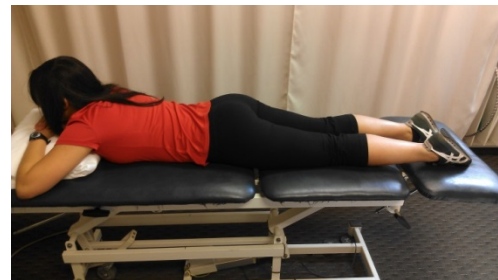


Patient begins lying on side with knees bent and arm under your body. Keep your hips in neutral, so that your feet are behind you. Contract core muscles and raise thigh off table with weight on your elbow and knee, so that your body is in a straight line. Hold this for 10 seconds initially and gradually increase to 60 seconds. To increase difficulty, straighten your legs and maintain balance on elbow and the feet.

3. Hip Extension

A. Supine/ Prone Glut Set:

The patient either lies on their back or stomach and with knees extended. The patient then tightens and maintains contraction of gluteal muscles for a 5 second hold; relaxing between each rep.

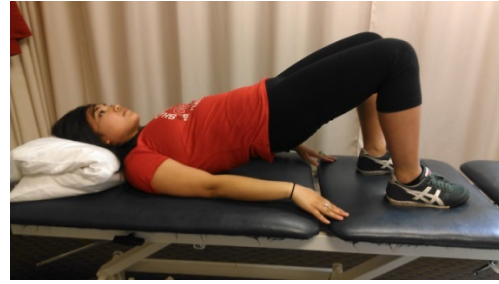
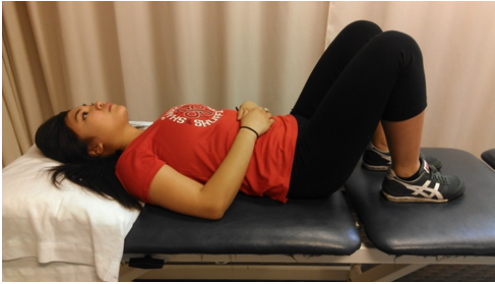


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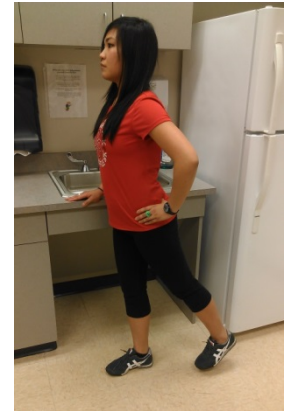
B. Bilateral Bridging:



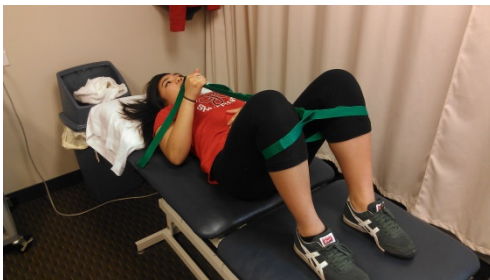
Patient is instructed to lie on back with knees bent, feet planted on floor. Maintain core stability and keep spine straight while contracting the glut muscles. Raise buttock from floor until hips are in line with shoulders and knees. Start with slow repetitions and progress to holds from 2-10 seconds.

C. Standing hip extension:

Patient stands on both feet, then contracting core and glut muscles, kick one leg behind. The patient should maintain an upright stance with no trunk lean, and keep pelvic height even. Perform first without resistance, and then add Theraband to increase difficulty.



D. Isometric hip abduction with bridging:



Perform supine isometric as described above, with use of Theraband or Pilates ring as form of resistance. While maintaining this contraction, the patient raises hips up from table and the return to starting position. Start with slow repetitions and progress to hold for 3-5 seconds.

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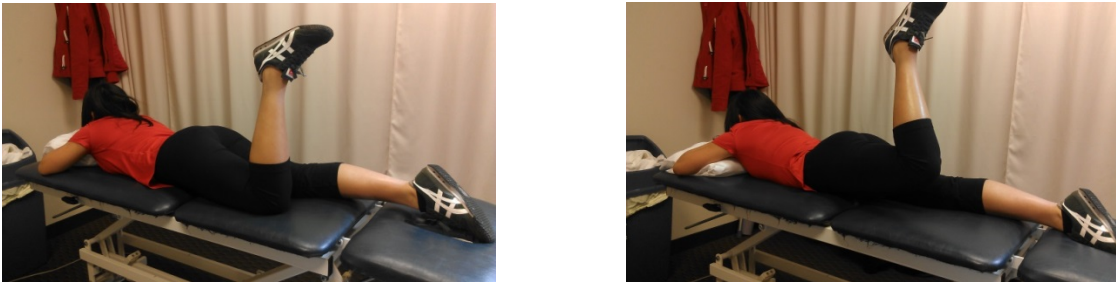
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E. Quadruped hip extension:



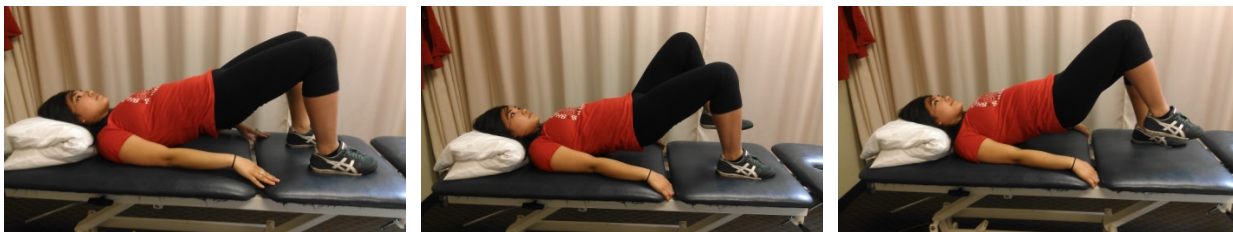
Patient is instructed to begin on all fours with knees under hips and hands under shoulders. Then keeping one knee bent, contract core and glut muscles to extend one leg behind, maintaining even hip height and spinal neutral. To increase difficulty, extend leg straight, eventually adding resistance by adding ankle weights.

F. Prone bent knee hip extension:



Patient is instructed to lie on stomach with abdomen and head supported. Then with one knee bent, tighten abdomen, and raise leg off floor bringing the foot towards ceiling. Avoid arching low back. Perform first without resistance, and then add Theraband or ankle weights to increase difficulty.

G. Bridge and march:



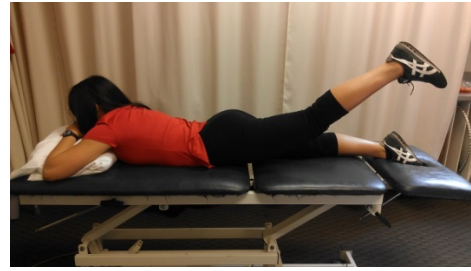
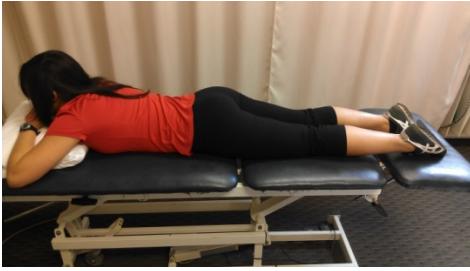
Patient is instructed to lie on back with knees bent, feet planted on floor. Contract glut and core muscles to raise both hips off floor as in bilateral bridging. Maintain muscle contraction to lift one foot 1-2 inches off the floor; do not allow hips to drop. Lower foot to floor keeping the hips lifted, and then raise other foot to same height and repeat. (Patient must perform 1E without compensation before this can be added.)

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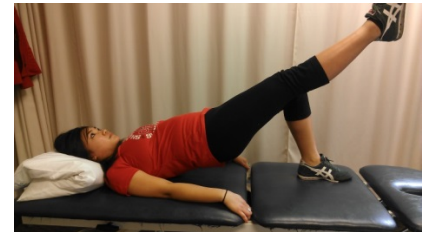
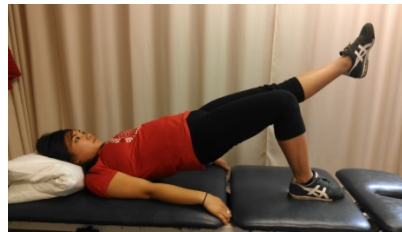
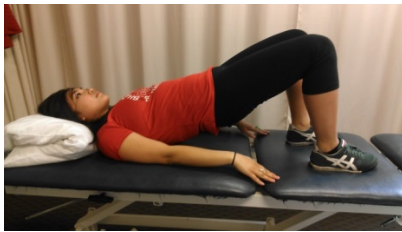
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H. Prone Hip Extension:



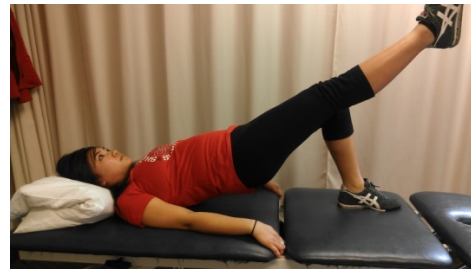
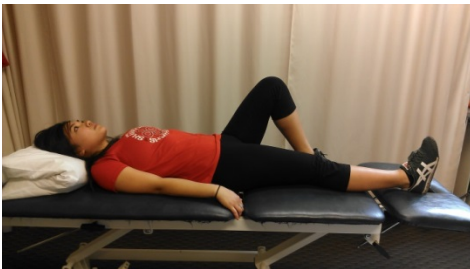
Patient is lying on stomach with both knees extended. Then, tighten muscle on front of thigh to maintain a straight leg. Avoid arching the lower back by contracting the core throughout the exercise. Contract glut muscles to then lift leg from the surface while keeping point of hip in contact with the table. Perform first with no resistance, and then add ankle weights to increase difficulty.

I. Bridge and Kick out:



Patient is instructed to lie on back with knees bent, feet planted on floor. Contract glut and core muscles to raise both hips off floor, as in bilateral bridging. Maintain muscle contraction to lift one foot off the floor, do not allow hips to drop. Straighten your raised leg out, and then bend it back and lower foot to floor keeping the hips lifted. Then raise other foot to same height and repeat. (Patient must perform 1F without compensation before this can be added.)

J. Unilateral Bridge:



Patient is lying on back with both knees bent, feet planted on floor. Contract the abdominal muscles to raise one foot 1-2 inches off the floor. Then the patient tightens glut muscles and while not allowing pelvis to drop, raises the hips to about knee height. Lower hips to floor and repeat. Then perform with other foot staying in contact with the floor. Progress from repetitions to 2-8 second holds. (Patient may progress to completing with knee extended in air when able to complete 1F without compensation.)

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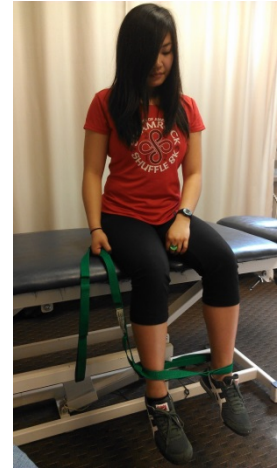
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4. Hip Internal Rotation/ External Rotation

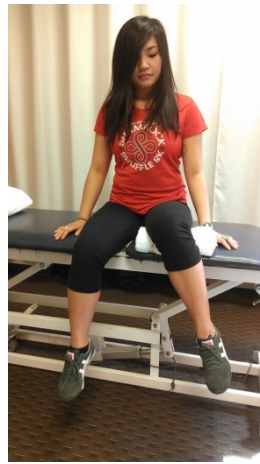
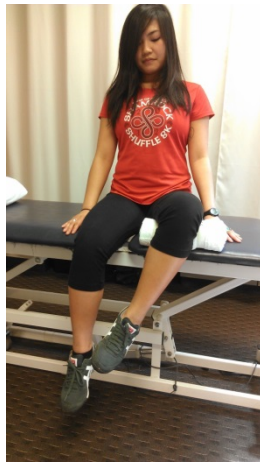
A. Isometric seated:



Patient is instructed to sit on edge of table with legs over edge. For internal rotation loop a belt around the ankles, keep knees bent at right angle, and pull ankles out against the belt while keeping knees still. For external rotation, stay in same position and place a pillow or ball between the ankles. Keep knees at right angle, and then squeeze ankles together against pillow while keeping knees still.



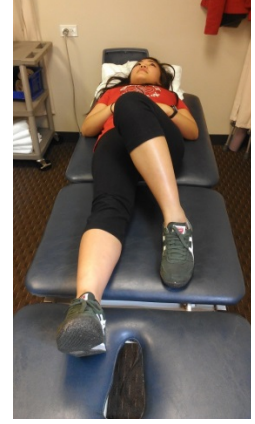
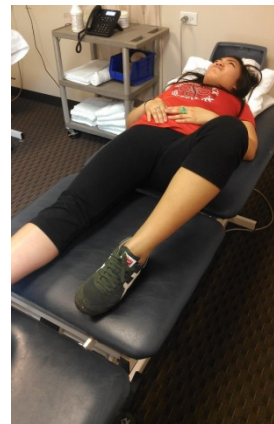
B. Seated AROM:



Patient sits on the side of the bed as with isometrics, only without the ball or belt at the ankles. While sitting with good posture to avoid pelvic tilt, slowly rotate the foot in toward the opposite leg and then move it out to the outside. Be sure that your knee does not move in and out as compensation. Perform first with no resistance, and then add ankle weights to increase difficulty.

C. Bent knee fall out/in:

Patient is instructed to lie on back with leg bent and foot planted on floor. Tighten abdominal muscles and allow knee to fall out towards floor. Return to neutral position. Then tighten abdominal muscles and allow knee to fall in towards midline of body. Perform first with no resistance, and then add ankle weights around the knee to increase difficulty.

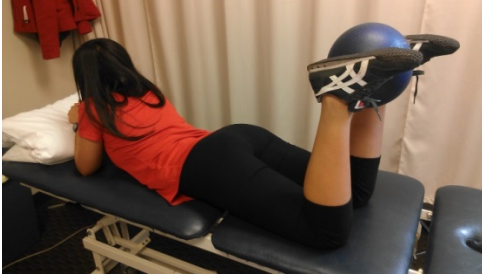


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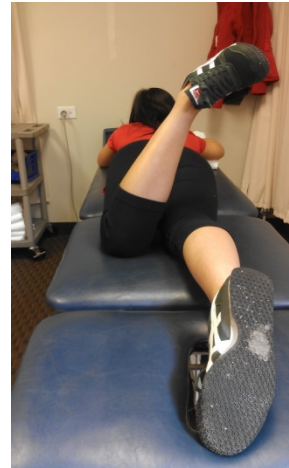
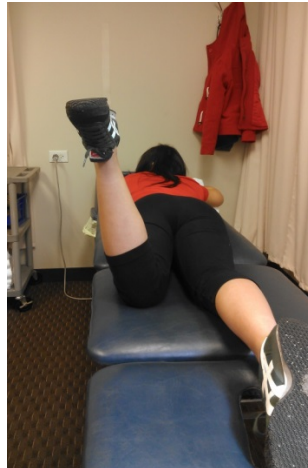
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D. Prone Isometric:



Patient is instructed to lie on stomach with knees bent. For internal rotation loop a belt around the ankles, keep pelvis flat, knees bent at right angle, pull ankles out against the belt. For external rotation, stay in same position and place a pillow/ball between the ankles. Keep pelvis flat and knees at right angle, and then squeeze ankles together against pillow or ball.

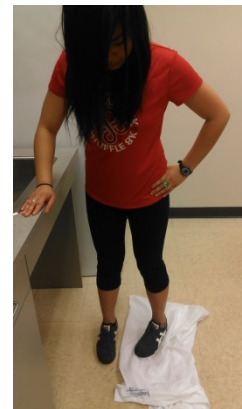
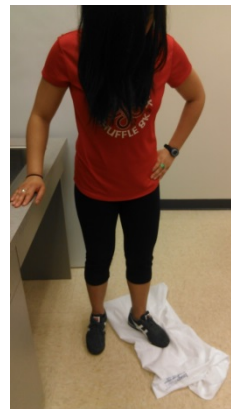
E. Prone AROM:



Patient lies on stomach with one leg straight, the other knee bent (foot up towards the ceiling). Slowly lower leg out to side keeping pelvis on the table, keep stomach tight. Return to neutral position and then allow leg to lower in towards other leg. Perform first with no resistance, and then add ankle weights to increase difficulty.

F. CKC rotation:

Patient stands with one foot on slick surface (i.e. tile floor or slide board). A towel may be useful in decreasing friction. Tighten the abdominals and keep the pelvis facing straight ahead. Rotate the leg so that the toe points out and then turn the leg to point the toe in.

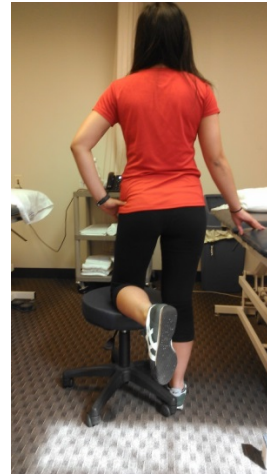
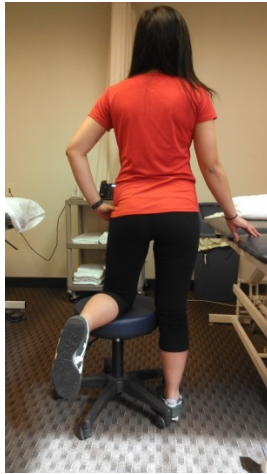
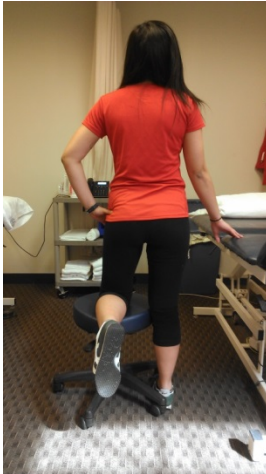


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G. *Kneeling on stool:*



Patient places knee of surgical leg on a stool that is appropriate height so that the pelvis/hips stay level. The other foot is planted on the ground for stability. Tighten core muscles and glut muscles so that hips remain at same height. Rotate hip so that ankle comes out to the side and then back in towards other leg. Perform first without resistance, and then add Theraband to increase difficulty.