



DOWNSTATE
HEALTH SCIENCES UNIVERSITY



UNIVERSITY
ORTHOPAEDIC
ASSOCIATES



Hip Arthroscopy

Rehabilitation Protocol and Patient information



Assistant Professor, Department of Orthopaedic Surgery
SUNY Downstate Health Sciences University
Office: 718-270-4335
mazen.ibrahim@downstate.edu

We Care.

Welcoming to All
Equity
Collaboration
Accountability
Respect
Excellence



Name: ----- MRN: -----
DOB: ----- DOS: ----- Side: ---R--/--L--

Anti-Rotational Bolster:

Hip Brace:

- Extension:
- Flexion:
- Duration:

Weight Bearing:

- Status:
- Duration:

Anticoagulant:

- Dose:
- Duration:

Heterotopic Ossification Prophylaxis:

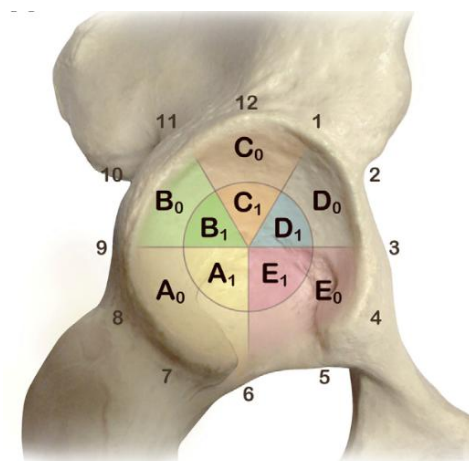
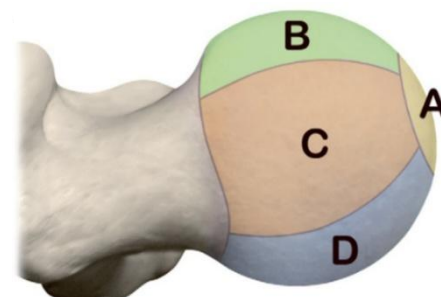
- Dose:
- Duration:

Losartan:

- Dose:
- Duration:

Operative Findings

Traction time:			
Biopsy	Synovial fluid		Culture
Synovectomy:			
Partial/Complete			
Ligamentum Teres:			
Debridement/Reconstruction			
Chondroplasty:			
Femoral Head/Acetabulum			
Microfracture:			
Femoral Head/Acetabulum			
Cartilage repair:			
Femoral Head/Acetabulum			
Acetabulum: Rim trimming/AIIS decompression			
Labrum:			
Debridement	Repair	Augmentation	Reconstruction
Femoral Head/Neck Osteochondroblasty:			
Capsule: Closure/Plication/Reconstruction/Thermal			
GT bursectomy			
Gluteus medius Repair/Patch augmentation/Healing response			
Psoas tendon:			
Hamstring:			
Injection: PRP/BMAC/Steroid/HA			





Post-op Hip Rehabilitation Guidelines

To Patient and Therapist,
Post-operative protocol is designed to maximize recovery following Hip Arthroscopy with Dr. Mazen Ibrahim. Hip joint will require exercise, movement, recovery, nutritional support, etc. but most of all, time is the healer. Knowing that, individuals will progress at their own pace, no two patients will follow the same path to recovery. **Hip preservation research shows that patients show improvement for two full years following surgery.** So, if you are 8 weeks, 6 months or even 18 months post-op and having a “bad hip day”, it is completely normal.

Activation/Strength exercises are performed with “one perfect repetition repeated until fatigued”. When the body properly adapts to the load and the exercises are no longer challenging, increases in repetitions, sets, or resistance can be used to further muscular development. Care should be taken to assess appropriate muscle firing patterns during each exercise with minimal compensation, as neuromuscular training is a vital aspect of appropriate muscle re-education.

Passive/Active range of motion movements should be relatively pain-free. It is not necessary or helpful to push into pain and/or pinching at end ranges. It should be comfortable and allow the patient to remain unguarded while the movements are performed and progressed.

Stretches should also feel good, not painful. Apply a mild stretch sensation to the target muscle, breathe into the stretch sensation until it dissipates. This should occur within 30-60 seconds. From there, a stretch sensation can be re-applied using the technique described above. If a stretch does not dissipate, it is a clear indication that the stretch is too aggressive. Start over with a milder stretch sensation.

Crutches:

Weight through surgical leg to assist blood flow and keep nerves and muscles active. Partial flat foot weightbearing., then wean 10-15% per day (2-4 weeks).

Hip Brace:

0-90° flexion for 2 weeks, to reduce stress on the labrum repair. While walking (short car rides worth keeping on, long car rides take off). Avoid activating hip flexor, limit hyperextension.



Anti-Rotational Bolster:

While lying down flat (21 days). Prevents external rotation which puts stress on capsular repair.



Sleep:

Sleep either on the back using the bolster, boots, and Velcro strap, or on the CPM, or on the surgical side with a pillow between your legs and feet secured in the boots and Velcro. Patient can sleep on either side after your external rotation restrictions are lifted (21



days). To avoid stress on the anterior capsule, refrain from lying on the stomach (for 6 weeks after surgery).

Limit Active Hip Flexion:

To prevent irritating hip flexors (2 weeks). Use opposite leg to lift surgical leg on and off table. Use brace to get in and out of car and over obstacles. No restriction of passive hip flexion.



Sexual Activity:

Permitted as long as it stays within the post-operative range of motion restrictions.

Ankle Pumps:

10 times per hour (both legs) when awake, also using SCDs/calf squeezers, keep blood moving to prevent blood clots.

Incentive Spirometer:

Perform 10 deep breaths throughout the hour while awake the first 2 weeks. Gets lungs back in shape after surgery, as anesthesia, and pain medications slow down breathing.



SCD'S/Calf Squeezers:

While sedentary greater than 20 minutes (During: CPM, ice, travel, lying down and sleep). Prevents the formation of blood clots.



CPM:

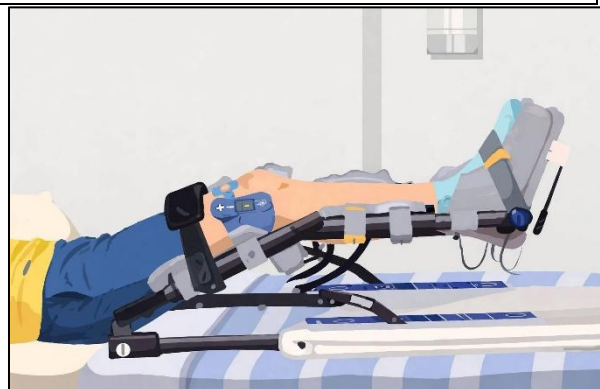
Helps to properly align collagen and reduces amount of scar tissue formation during the healing process.

ROM Settings: 10-45 first week; 0-60 second week; 0-70 third week; 0-80 fourth week and beyond (6-8 h/day)

Orient 10° out from midline of the body.

Place pillow/towel above outside of knee against thigh to control rotation and under opposite buttock to even out pelvis.

Place on the inside of bed so machine does not fall off.



Anticoagulant:

After hip arthroscopy (2-4 weeks), anticoagulation is individualized. Direct Oral Anticoagulants (rivaroxaban, apixaban) are first-line for high-risk patients, while



lower-risk patients may receive aspirin or shorter courses.

Chemoprophylaxis for heterotopic ossification:

Celebrex 200mg twice daily is recommended for 2 weeks (unless contraindicated).

Post-operative adhesions and fibrosis prophylaxis:

Clinical studies suggest, 12.5 mg of Losartan twice daily for 2 weeks may theoretically reduce fibrosis and intra-articular fibrosis. Losartan is an angiotensin II receptor blocker (ARB), has been investigated for its anti-fibrotic properties. It inhibits transforming growth factor beta (TGF- β), a key mediator in scar tissue formation, and may help reduce post-operative adhesions that can limit hip mobility or necessitate revision surgery. Monitoring for side effects such as hypotension or dizziness is recommended.

Other Medications:

Tylenol 500mg 2 tablets by mouth every 6 hours for baseline pain control.

Methocarbamol (Robaxin) 750 mg every 8 hours as needed for muscle spasm (2 weeks).

Oxycodone 5 mg 1-2 tabs by mouth every 4-6 hours as needed for pain (3 days).

Ondansetron (Zofran) 4 mg every 8 hours as needed for nausea.

For constipation (while you are on narcotics): Senna 8.6 mg twice daily as needed.

MiraLax 1-2 times daily as needed.

Docusate (Colace) 100mg twice daily as needed.

Melatonin as needed for insomnia.

Benadryl as needed for itching.

Ice Machine:

Decreases pain, inflammation, and swelling. 3-4 / 20-30 min cycles throughout the day for 2 weeks.

Do not use continuously overnight to avoid frostbite.



Incisions:

Change bandages is indicated only if become saturated.

No baths, hot tubs, steam rooms or saunas while stitches are in.

Shower with waterproof bandages, if water gets in, change after shower. Skin should be clean and dry to ensure good adhesion.

Portal sutures are removed 14-21 days after surgery. Steri-strips are left to fall off on their own. Vitamin E could be used after stitches removal.

Numbness: Outside of thigh, top of foot and groin due to traction, resolves in weeks to months.

Returning to Work/School:

Sedentary jobs: We recommend taking at least 2 weeks from work due to post-operative fatigue. Advised to get up from the workstation every 20 minutes to reduce stiffness.

Physically demanding job requiring a lot of walking, lifting, crouching, etc., most likely 8-12 weeks are needed before returning.

Driving:

Automatic transmission: When the patient is off narcotics, feels comfortable behind the wheel (typically around 10-14 days post-operatively).

Manual transmissions: Right surgical hip Similar to automatic transmission. Left surgical hip 4-6 weeks post-operatively.

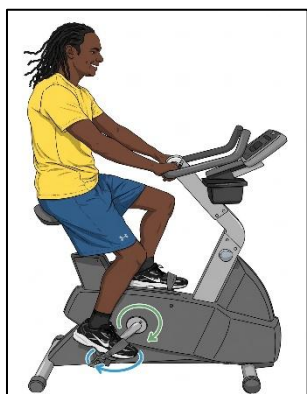


Bike:

Stationary Bike, bike seat height is adjusted so knee does not flex beyond 5° at bottom of stroke. Non-operative provides the motion while operative leg “goes along for the ride” (10 minutes forward 10 minutes backward, twice daily).

Resistance could be added 6 weeks after surgery. Progress intensity and duration gradually as the surgical hip tolerates (provided no increase in hip pain).

At least at a level 5 on a stationary bike before cycling outside could be started first on flat terrain, preferably on a looped course, to allow for an easy exit strategy if the hip gets sore.



Circumduction:

At least three sessions per day (for 10 weeks after surgery). Work in a pain free range from 45°-70° (10 minutes clockwise and 10 minutes counter clockwise).



Swim with/without Pull Buoy:

Use a Thera-band around thighs and pull buoy to reduce overuse of hip adductors.

Kicking while swimming could begin 4 weeks after surgery, starting by a gentle kick and introduce it progressively.

Refrain from flip turns, breaststroke, and butterfly for at least 8 weeks.

Other Physiotherapy Modalities:

1. Blood flow restriction training:

BFRT could be started at least 4 weeks after surgery if it is available by a certified practitioner and the incisions are fully healed and suture out. BFRT guidelines and precautions should be followed.

2. Dry needling:

To reduce the risk of infection, at least 6 weeks post-operative before dry needling could be performed.

3. Massage therapy:

At least 4 weeks after surgery. Advised not to push into painful ranges of motion and not to perform axial distraction of the hip i.e. pulling on the foot towards the end of the table.

Post-operative X-rays:

14-21 days post-operative.

Exercise Descriptions:

Phase I (6-8 weeks):

Mobility and Protection

Goals:

- Protect integrity of repaired tissue.
- Restore range of motion.
- Diminish pain and inflammation.
- Prevent muscular inhibition.

Precautions:

- Specific ROM restrictions.
- Weight bearing restrictions.
- Do not push through hip pain.
- a. Isometrics:
 - Ankle pumps throughout day.
 - Gluteal Sets: Tighten buttock muscles.
 - Quadriceps Sets: Tighten thigh muscles.
 - Transverse abdominus contraction.
- b. Soft tissue massage: As needed, twice/day: gently flush out edema.



c. Stationary Biking:

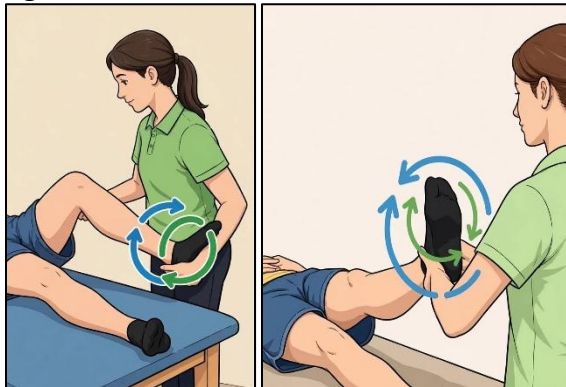
d. Passive ROM:

Performed by therapist/caretaker twice/day.

- Circumduction:

In Flexion: Lying on the back with the hip ~70° flexion, have partner move the knee in clockwise and counter clockwise.

In Neutral: Lying on the back with the hip and the knee straight, have partner move the leg in clockwise and counterclockwise.



- Supine hip roll (IR):

Lying on the back with legs straight, have partner rotate leg inward and roll back to neutral (no external rotation).



- Flexion:

Lying on the back have partner bring knee toward your chest.

- Abduction:

Lying on the back with leg straight have partner bring leg away from your midline as tolerated.



- Prone Internal Rotation (IR):

Lying on stomach with knee bent to 90°, have partner bring ankle away from the body (hip IR). Do not bring ankle in toward the body (external rotation) until allowed per ROM precautions.



- Extension:

Lying on your stomach have partner grasp knee and lift leg up from the table.



- External Rotation / FABER position (after 3 weeks):

Lying on the back bring involved leg into figure four position with ankle resting above opposite knee. Gently lower bent knee towards the table.



e. Passive Stretching:

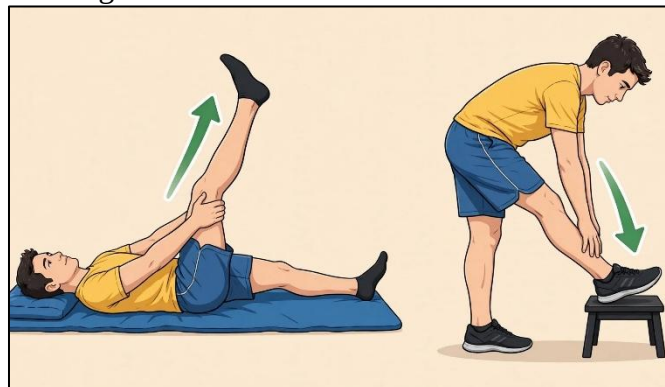
- Quadriceps Stretch:

Lying on stomach, have partner bring ankle toward buttock, feeling a stretch in front of thigh. Perform before or after prone ROM exercises.



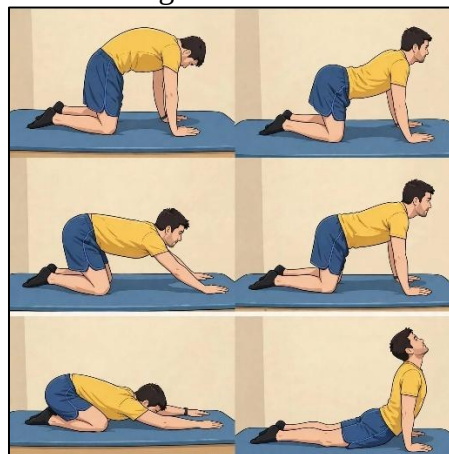
- Hamstring stretch:

Therapist assisted, on the back, sitting, or standing as tolerated.



f. Quadruped Rocking:

- Arch the back down then up as in cat and a camel exercise.
- With back in a straight position, shift the body weight forward on the arms then back onto the legs.
- Progress gradually to full motion as pictured to the right.



- Piriformis Stretch:

Lying on non-operative side, (bottom leg straight/pelvis stacked) bend involved hip to 50-70° flexion, hook top foot behind uninvolved knee. Stabilizing pelvis, lower the involved knee towards table. Stretch should be felt in buttock. Avoid pinch in groin. May need to start with pillows to support the leg. Sleep in this position when not in the CPM.

Phase II: Stabilization

Phase I with its emphasis on mobility must continue for 6-8 weeks; however, Phase II with its emphasis on stabilization, needs to be started early in week 2 while continuing to work on mobility.

Section 1: Stabilization Progressions:

Goals:

- Protect integrity of repaired tissue
- Restore PROM within restrictions
- Diminish pain and inflammation
- Correct Muscle Imbalances

Precautions:

- Specific ROM restrictions
- Weight bearing restrictions
- Do not push through hip pain

a. Stool Hip Rotations:

Place knee of involved leg on a stool. Rotate hip without moving trunk, so that the stool turns (from neutral to internal rotation (moving your foot outward from the body) until ROM precautions are gone (3 weeks). Stool Hip Rotations with cord Progress to using a resisted band when tolerated.



b. Prone Hip Rotations:

Facilitate deep hip rotators by lying on stomach with knee bent to 90°, allow foot to drop out so hip is in full IR. Actively rotate hip back to neutral per ROM precautions Partner can gradually add resistance to this motion. External rotation beyond neutral after ROM precautions are gone (3 weeks).



c. Prone Resisted Hamstring

Facilitate hamstring contraction by lying on the stomach and having partner manually resisting knee curls.



d. Prone / Glut Max Progression:

Progress when able to hold stable + no pain.

• Prone Resisted Glute Max:

Facilitate contraction by lying on the stomach and having partner manually resisting hip extension while knee is flexed 90 degrees or greater. May place pillow under abdomen to keep hips in slight flexion as more glute max firing occurs in this range

• Stomach leg raises (glut max focus):

Lying on your stomach flex knee 90 degrees or further. Lift the knee off the table keeping the knee flexed. Raise your leg up 6-8 inches, keep hips anchored to table. (A towel may be wrapped around ankle pulling towards the head to assist in keeping the knee flexed)



- **Marching:**

Perform the heel slide then lift the heel off table so hip and knee is bent to 90 keeping core stable, return leg to starting position. Alternate legs. Only lift heels if unable to keep back stable.



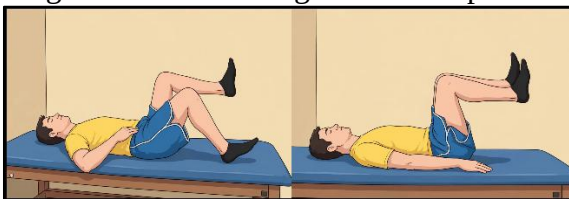
- **Prone heel squeeze:**

Lie on the stomach. Slightly separate then bend the knees about 45 degrees, place the heels together (Froggie). Draw abdominals in and squeeze heels together for 5 seconds. Increase difficulty by lifting the thighs off the mat with heel squeeze maintaining a stable pelvis. Do not arch the back



- **Table Top:**

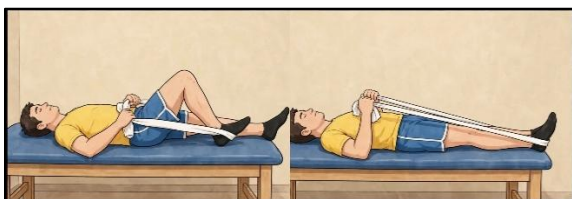
Progress from marching to Table Top.



e. **Supine/Flexor Progression:**
Progress when able to hold stable + no pain.

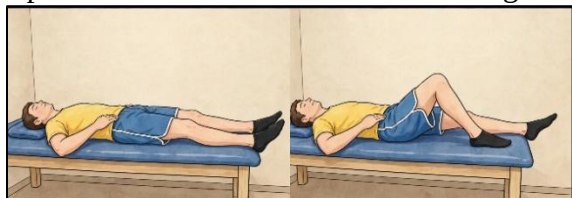
- **Heel Slides with Strap or Assist:**

Lying on the back place strap around foot, draw in transverse abdominus (TA) and use arms to pull heel towards your buttocks keeping heels on mat or have person assist the heel.



- **Heel Slides WITHOUT Strap:**

Reduce the use of strap or assist and use the hip flexor to slide the heel. Alternate legs.



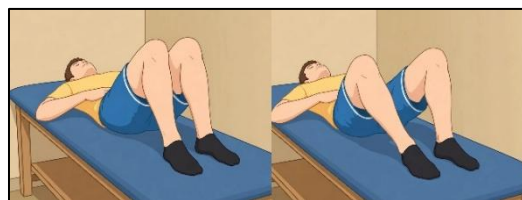
- **Table Top to Heel slide:**

Further progression includes sliding out each leg in the air as in “dead bug” exercises.



- **Bent Knee Fall Outs:**

(start when cleared for external rotation 3 weeks) Lie on the back with both knees bent. Contract the TA. Drop one bent knee to the side (only as far as you can tolerate). Do not let the opposite pelvis lift. Repeat on the other side.

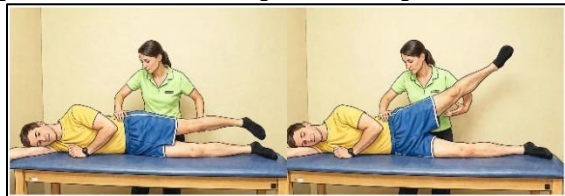


f. **Side-lying / Glut Medius Progression:**
Progress when able to hold stable + no pain.



- Assisted Side leg raises:

Facilitate gluteus medius with assisted side lifts in muscle test position. Work on eccentrics (negatives) until patient can perform lift without pelvic compensation.



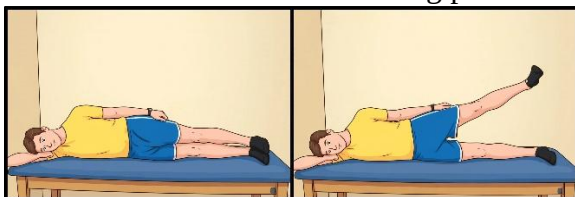
- Side leg raises with step stool:

Progress to utilizing a stool to perform lifts from easier start position. Focus on lifting up and slightly back without moving pelvis.



- Side leg raises:

Progress to raising top surgical leg without assist or stool and without moving pelvis.



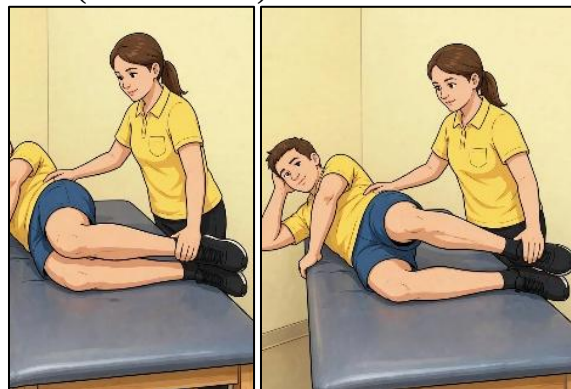
- Rose Wall Slides:

Progress to lying on uninvolved side, shoulders, hips, and heels flush up against a wall. Slowly slide top involved heel along wall maintaining drawn in abdominal muscles.



- Neutral Hip Clams:

Laying on the non-surgical side, hips straight and knees bent to 90 degrees. Engage TA & squeeze gluteal muscle to raise top knee without shifting pelvis, heels remain together throughout. Do not allow spine to collapse to table (after 3 weeks).



- g. Bridge Progression:

Progress when able to hold stable + no pain.

- Double leg bridge:

Lying on the back place rubber tubing around knees with hip and knees bent. Raise buttocks while keeping core stable then slowly lower.



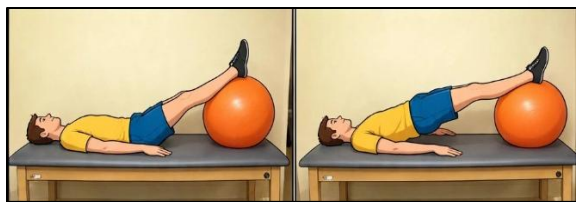
- Single leg bridge:

Progress to single leg bridging.



- Bridge with feet on Swiss Ball:

Lying on the back place feet up on swiss ball. Keep knees straight and core stable hold 5 seconds then lower.



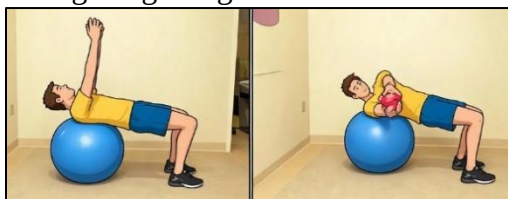
- Bridge with shoulders on Ball:
Progress to laying with shoulders on ball and feet on floor then lowering and raising the buttocks.



- Bridge with single leg:
Progress to lifting one leg by extending the knee then perform with the other leg. Do not go up and down with the hips.



- Bridge with Trunk Rotations:
Add arm rotations in this position or perform with single leg bridge



h. Passive Stretching:

- Kneeling hip flexor stretch:
In a half kneeling position with the involved knee on the floor tighten TA and glut muscles. Shift weight forward while keeping trunk upright, feeling stretch in front of hip/thigh. Therapist can perform Thomas stretch in therapy



- Iliotibial (IT) Band stretch:
Standing, cross the non-surgical leg in front of the surgical leg. Keep the pelvis levelled and straight shifting the body weight over the surgical leg. Most of the weight should be on the surgical leg.



- Adductor stretch:
Standing, shift the weight onto the non-surgical leg while keeping the surgical leg planted and out to the side (see picture). Use your hand to push the pelvis a little farther toward the other leg to feel a stretch in your groin muscles.



i. Water Progression

Started after the stitches are removed UNLESS cleared and there is use of op-site dressings covering the sutures.



Initially 10-15 minutes progressing to 20-40 minutes, 3 times/week

Options for pool therapy:

- **Water Walking:**

Walk forward, backward and lateral in chest deep water. Emphasize normal weight shift to both sides, including microfracture patients.

- **Water Jogging:**

In deep water using an aqua-jogger or belt, jog in place.

- **Swimming:**

Frog kick (breast stroke) is a good internal rotation motion as long as there is no pinching; crawl or flutter kick works flexors and gluts but monitoring of hip flexor is important. Fins increase the load on the flexors so be more cautious. Using a pool buoy between the legs and just using arms is good for cardio without any precautions for the hip.

- **Exercises:**

Other exercise options should be cleared by the therapist.

j. **Planks:**

- **Supine Planks:**

Lie on the back propped up on the elbows. Contract the TA then lift the buttocks up off the table and maintain a straight “plank”.



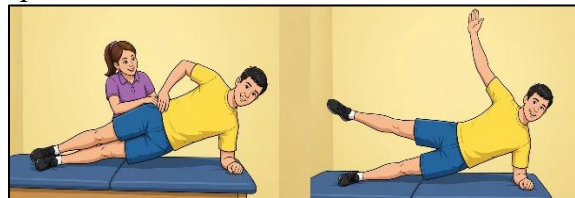
- **Prone Planks:**

Lie on the stomach propped up on the elbows. Contract the TA then lift the hips up off the table and maintain a straight “plank”.

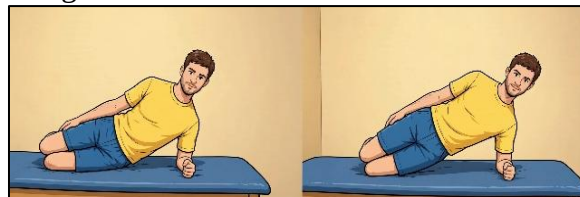


- **Side-lying Planks:**

Lie on one side propped up on the elbow, lift the pelvis and trunk up into a straight “plank”.



Perform with knees bent if too difficult straight



k. **Manual joint mobilization:**

Please utilize only as needed.

Do not **OVERSTRETCH**

- **Posterior Capsule:**



- **Medial Capsule:**



- **Lateral Capsule:**



l. **Stationary biking with resistance:**
30-45 minutes but extremely variable per patient.



Increase resistance slowly while maintaining 60-80 RPM.

Use interval work to allow recovery of flexor muscle groups.

Initially reduce the time on bike when initiating resistance

FOR Cyclists: Assuming the use of a good pedaling motion there will be more muscle activation of the hip flexors than in the normal population therefore:

1st three weeks: use flats if on a trainer verses stationary bike

3rd to 4th weeks: can use clip-less pedals but with no resistance



- Add 25% weight on surgical leg every 1-3 days until 100% continuing to use both crutches during this period.

Return to crutches if needed to avoid early fatigue. Avoid limping and focus on correct walking weight shift and mechanics. Make sure patient is getting full hip extension.



PHASE II:

Stabilization

Section 2: Gait and "Closed Chain"

Goals:

- Protect integrity of repaired tissue
- Restore PROM within restrictions
- Diminish pain and inflammation
- Restore Normal Gait Pattern

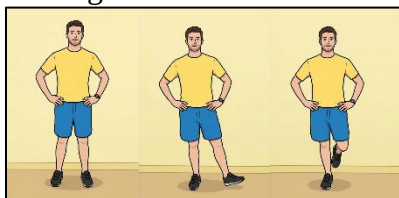
Precautions:

- Specific ROM restrictions
- Do not push through hip pain or pinching

m. "Crutch weaning"

- Weight shifting exercises:

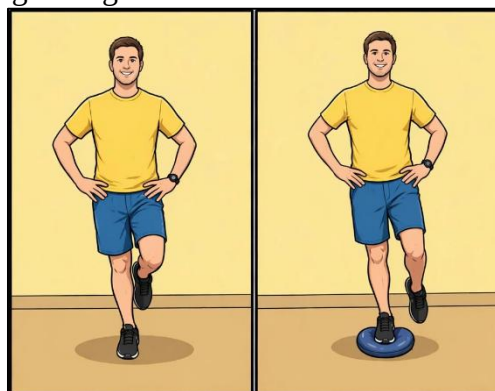
Forward, backward and lateral focusing on avoiding Trendelenburg/compensated Trendelenburg.



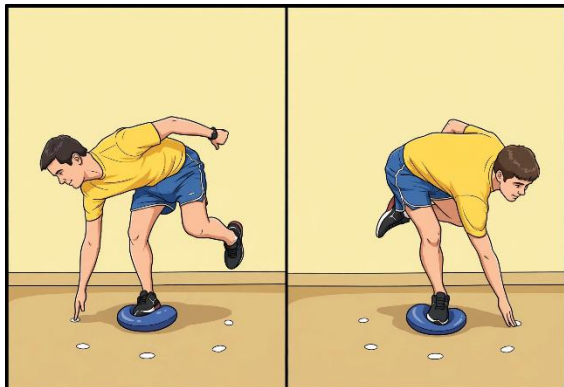
- Single Leg Balance exercises:
Focus on avoiding Trendelenburg/compensated Trendelenburg

n. Balance Progression:

- Single leg balance on flat surface:
Must be able to maintain single leg balance as noted in previous section before progressing to next exercises.



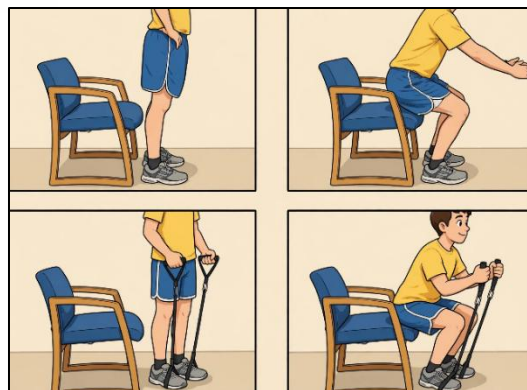
- Star or clock exercise on flat surface:
While standing with single leg balance on one leg; touch the opposite foot to spots on the ground marked at 9, 10.5, 12, 1.5, and 3 o'clock positions.



- Dyna-disc or Bosu:
Advance by using an unstable object such as the dynadisc or BOSU to perform single or double leg stance.



- Star or clock exercise on dynadisc:
Progress to performing the above noted star or clock ex. While on the dynadisc.
- o. Double 1/3 knee bends
- Start standing with feet shoulder width apart, bend at the knees to 60°. Do not allow knees to go past toes.
- Progress by using a sport cord for resistance.



- p. Leg press (limited weight)
Using light weight (20-30 lbs), perform leg press for endurance and muscle activation. Increase weight in Phase III.

- q. Pilates:
Footwork series, Skater series, hip extensions exercises should be performed on the reformer with an instructor:

- r. Elliptical trainer
Begin with minimal resistance and progress intensity or time as tolerated.

PHASE II:

Stabilization

Progression Criteria to Functional Exercises (running, skating, golf, dance) of Section 3:

- NO Pain
- Full ROM
- Normal Gait

Section 3: Functional Exercises:

Goals:

- Correct residual muscle imbalances
 - Restore normal gait pattern
 - Tolerate early phases of function
- Precautions:
- Gradual progressions with activities
 - NEVER use treadmill
 - Avoid hip flexor, adductor and piriformis irritation

- s. Functional Activities:



Patients looking to return to work or “play” should slowly progress back to their functional activities that are part of their lifestyle.

Pro, Elite, Amateur or patients wanting to perform at higher activity levels should follow sport specific progressions.

PHASE III: Strengthening

a. Single Leg Closed Chain Progression:

- Balance Squats:

With one leg behind on a chair, squat with your opposite leg to 70 degrees knee flexion. Perform with opposite leg on chair.



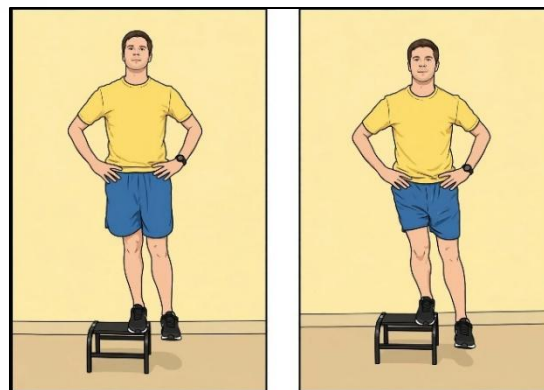
- Lunges:

Step forward with the involved leg while dropping the opposite knee straight down to the floor. Keep TA drawn in. Repeat with the opposite leg.



- Lateral Step downs:

Stand on the edge of a step (6-12 inches high) laterally with the involved leg. Bend the hip and knee keeping the pelvis level as if stepping down. Just touch the floor then return.



- Single 1/3 Knee Bends:

Same starting position as double knee bends but with only surgical leg. Bend knee to 60° flexion while maintaining a level pelvis and not letting the knee “fall in” (corkscrew).



- Single 1/3 Knee Bends with cord:

Progress by adding cord for resistance (sport test exercise)

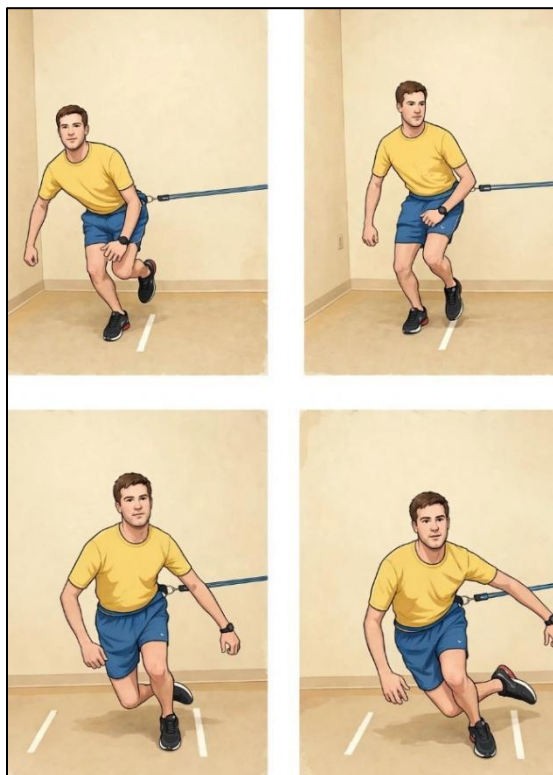


b. Side to side lateral agility with cord:

Attach the sport cord from the side with the surgical leg facing the cord. Step sideways to create tension on the cord. The athlete will hop laterally with cord resistance from their surgical leg, land momentarily on their non-surgical leg, only to return onto their surgical leg with the cord pulling them back to the starting position for a total test time of 80 seconds. Each repetition of 1 second includes exploding laterally off the surgical side, landing momentarily on the opposite leg, and then returning to the starting position with emphasis on absorbing by bending at the hip



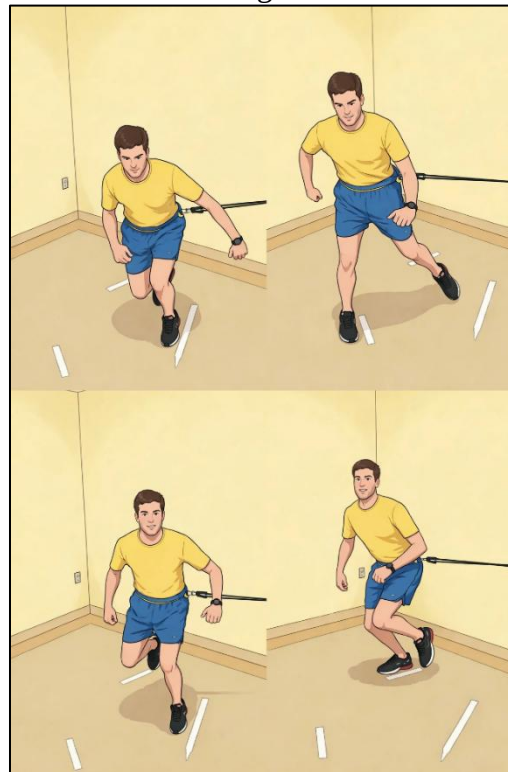
and knee with 30 degrees of knee excursion. Excursion is defined as the amount of absorption from knee flexion at landing to max knee flexion.



c. Diagonal side to side with cord:

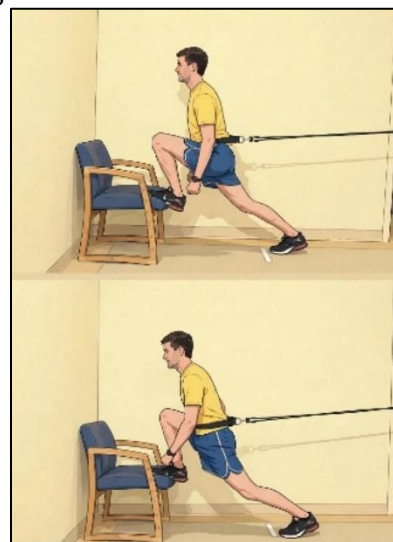
Attach the sport cord from the side with the surgical leg facing the cord. Step sideways to create tension on the cord. The athlete will hop diagonally forward at a 45° angle with cord resistance from their surgical leg, land momentarily on their non-surgical leg, only to return onto their surgical leg with the cord pulling them back to the starting position. The following repetition the athlete will hop diagonally backward at a 45° angle. The goal is 80 seconds, total. Each repetition of 1 second includes exploding diagonally forward or backward at 45° angles off the surgical side, landing momentarily on the opposite leg, and then returning to the starting position with emphasis on absorbing by bending at the hip and knee with 30 degrees of knee excursion. Excursion is

defined as the amount of absorption from knee flexion at landing to max knee flexion.



d. Forward Box Lunges with cord:

The athlete will perform alternating forward lunges onto a box with cord resistance at a cadence of 2 seconds per lunge for a goal of 2.5 minutes. The movement is a forward lunge with maximum hip extension without compensation at the pelvis or spine throughout the 2.5 minutes.





Phase IV:
Return to Sport

Functional Sport Test.

Passing the Sport Test means you are cleared per MD discretion!!!

Once the patient passes the Functional Sports Test, we leave the responsibility up to the patient and coach to continue to progress training for sport. This includes proper conditioning and sport specific agility.

- Multi-Plane Agility
- Advanced Plyometrics
- Sport Specific Training