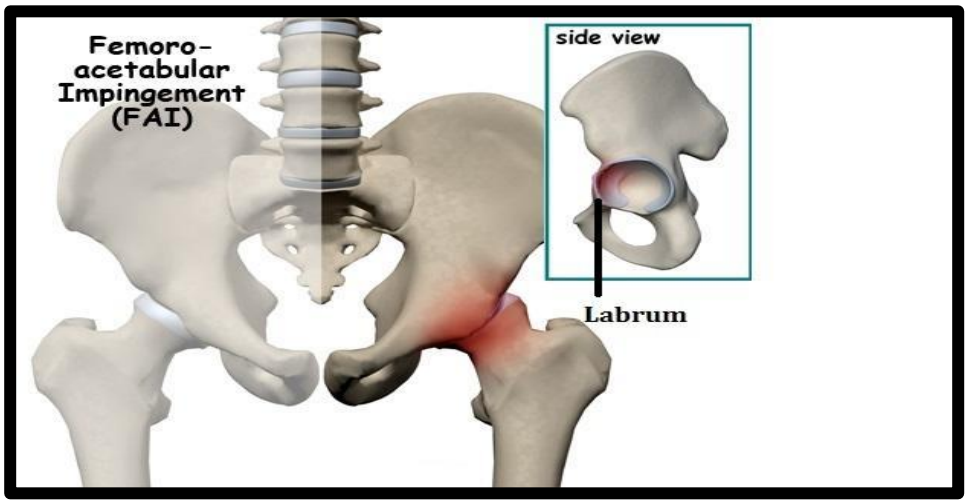
FAI

Femoroacetabular Impingement

A Patient Information Guide



NAME: _____

SURGICAL DATE: _____

IMPORTANT CONTACT INFORMATION:

Dr Wong's Rehab team: drwongrehab@apexorthorehab.ca

Apex Orthopedic Rehabilitation: (902) 835-2932

Orthofit: (902) 233-0181

Dr Wong's office: (902) 473-7626

QEII Ortho clinic: (902) 473-4166

TABLE OF CONTENTS

ANATOMY AND FEMOROACETABULAR IMPINGEMENT (FAI)

- Hip Joint Anatomy
- What is FAI?
- What causes FAI?
- Diagnosis and Treatment
- FAQ – PREHAB, SURGERY, AND REHAB

HIP JOINT ANATOMY

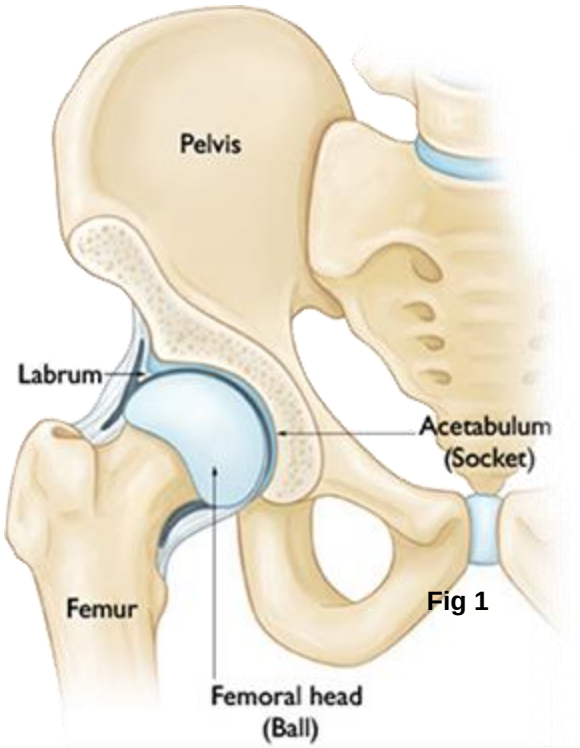


Fig 1

The hip joint (fig 1) is a ball and socket joint, a type of synovial joint in which the ball-shaped surface of one rounded bone fits into the cup-like depression of another. The hip is formed by the articulation of the rounded head of the femur and the cup-like acetabulum of the pelvis. The acetabulum is formed by three pelvic bones — the ilium, pubis, and ischium. The acetabulum is lined by strong fibrocartilage called the labrum. The labrum forms a gasket around the socket, creating a tight seal helping provide stability to the joint, as well as keeping all the fluid inside the joint.

WHAT IS FAI?

Femoroacetabular Impingement (FAI) is a condition where the hip socket (acetabulum) and the thigh bone (femur) abnormally rub against each other when we bend or rotate the hip, causing sharp pain and pinching of the labrum. The labrum is a rim of soft tissue that lines the hip socket; it may become damaged or torn as a result of FAI.

As seen in the picture (fig 2), typically your hip bone should slide through the socket free of jamming any soft tissue structures.

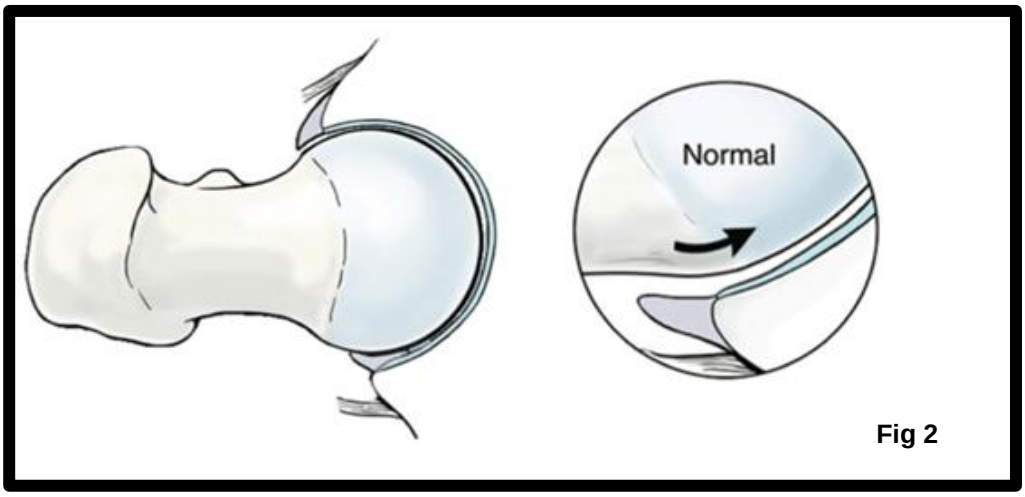
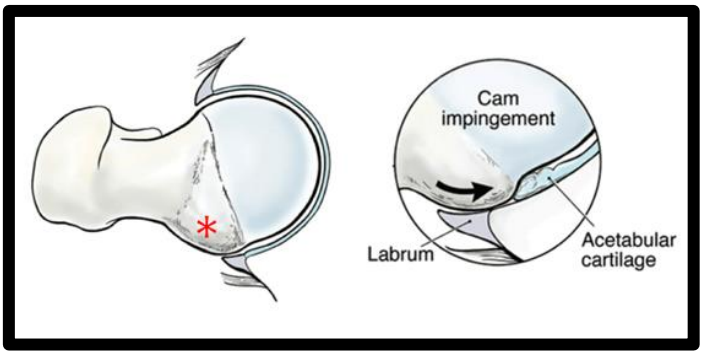


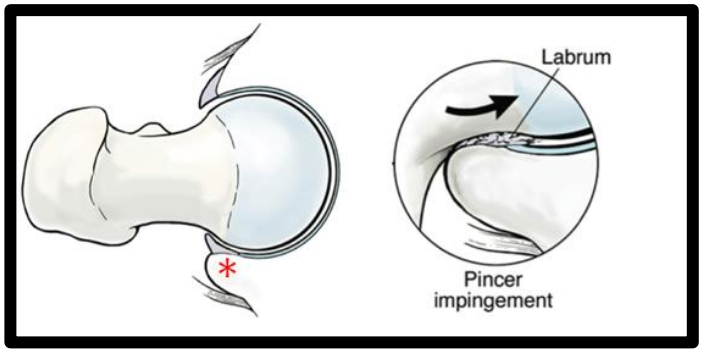
Fig 2

FAI, bone spurs develop around the femoral (ball) head and/or along the acetabulum (socket), the development of these spurs is thought to be genetic/inherited. The bone spurs cause the hip bones to hit against each other, rather than to move smoothly. Over time, this can result in the tearing of the labrum (soft tissue) and breakdown of articular cartilage (osteoarthritis)

FAI generally occurs in three forms: The first, a **Cam-type deformity (fig 3)**, occurs when the bone spurs form along the upper surface of the femoral head. The second, a **Pincer-type deformity (fig 4)**, occurs when the bone spurs form on the upper lip of the acetabular cup. The third, and most common is a combination of both deformities, known as **"Mixed".**



CAM-Type (fig 3): where a bone spur develops on the femur causing it to no longer be round; most common in males.



Pincer-Type (fig 4): where the socket is too deep or has bony spurs at the tip (image 2) most common in females.

CAUSES

FAI occurs because of abnormal formation of the hip bones; changes in the shape of the femoral head or changes to the hip socket. It is the deformity of a cam bone spur, pincer bone spur, or both, that leads to joint damage and pain. When the hip bones are shaped abnormally, not much can be done to prevent the progression of FAI to osteoarthritis other than surgery.

Competitive athletes or active patients may work the hip more aggressively; they may begin to experience pain earlier in life than those patients who are less active. However, people with bone spurs can get symptoms of pain at anytime.

It is unknown how many people may have FAI. Some people may live very active lifestyles with FAI and never have problems. When symptoms develop, however, this usually indicates that there is damage to the cartilage or labrum and is likely to progress.

HIP PAIN:
DIAGNOSIS AND TREATMENT

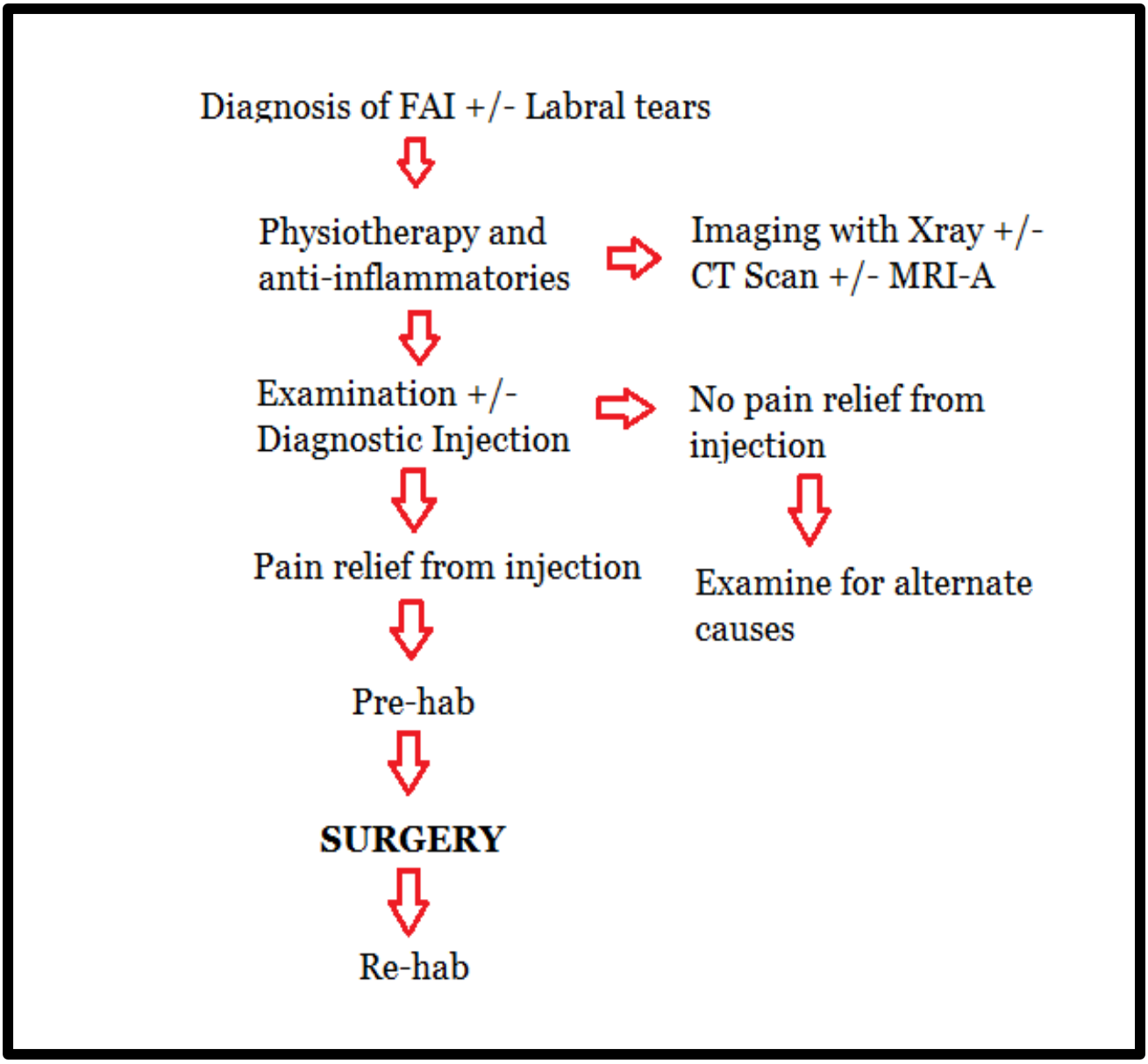


Fig 5: Breakdown of diagnostics process

DIAGNOSIS & TREATMENT

DIAGNOSIS:

There are many causes of hip pain that must be excluded before a diagnosis of FAI syndrome can be considered. A full history of symptoms and examination should be done by a qualified and experienced medical doctor to help differentiate the causes.

In most cases, patients will complain of pain in the groin or hip. They will commonly describe the pain as a "groin pull" increasing when sitting, getting in and out of the car, or during any activity where the hip is in a flexed position. We often see patients point out the pain in a **"c-sign"** (Fig 6) when asking patients where their pain is located.

A physical examination is very important to determine the possible root of the pain. Usually walking pattern has not changed but there is a decrease in the range of motion of the hip, especially in the flexion position. Special testing is done to try and recreate symptoms of pain, to reproduce pain when the labrum is stressed.

Fig 6: Physical examination of hip for FAI examples

A hip joint injection may be recommended for patients with these symptoms. The injection can help temporarily relieve the pain. This helps to diagnose the cause of pain, as well as help to predict how much pain relief one can expect with surgery. This involves injecting freezing directly into the joint. By placing numbing medicine into the joint, the amount of immediate pain relief experienced will help confirm or deny the joint as a source of pain. If complete pain relief is achieved while the hip joint is numb it means this joint is likely the source of pain.

IMAGING

A clinical diagnostic exam is followed up by imaging including X-rays, 3D-CT Scans, and MRIs.

X-rays (fig 7) show the presence of extra bone build up, as well as the position of bones and joint. X-rays show the shape of the femoral head, showing any asymmetries.

The radiologist and orthopedic surgeon reviewing the image will look for three signs as an indication of FAI: the crossover sign, the posterior wall sign, and the ischial sign.

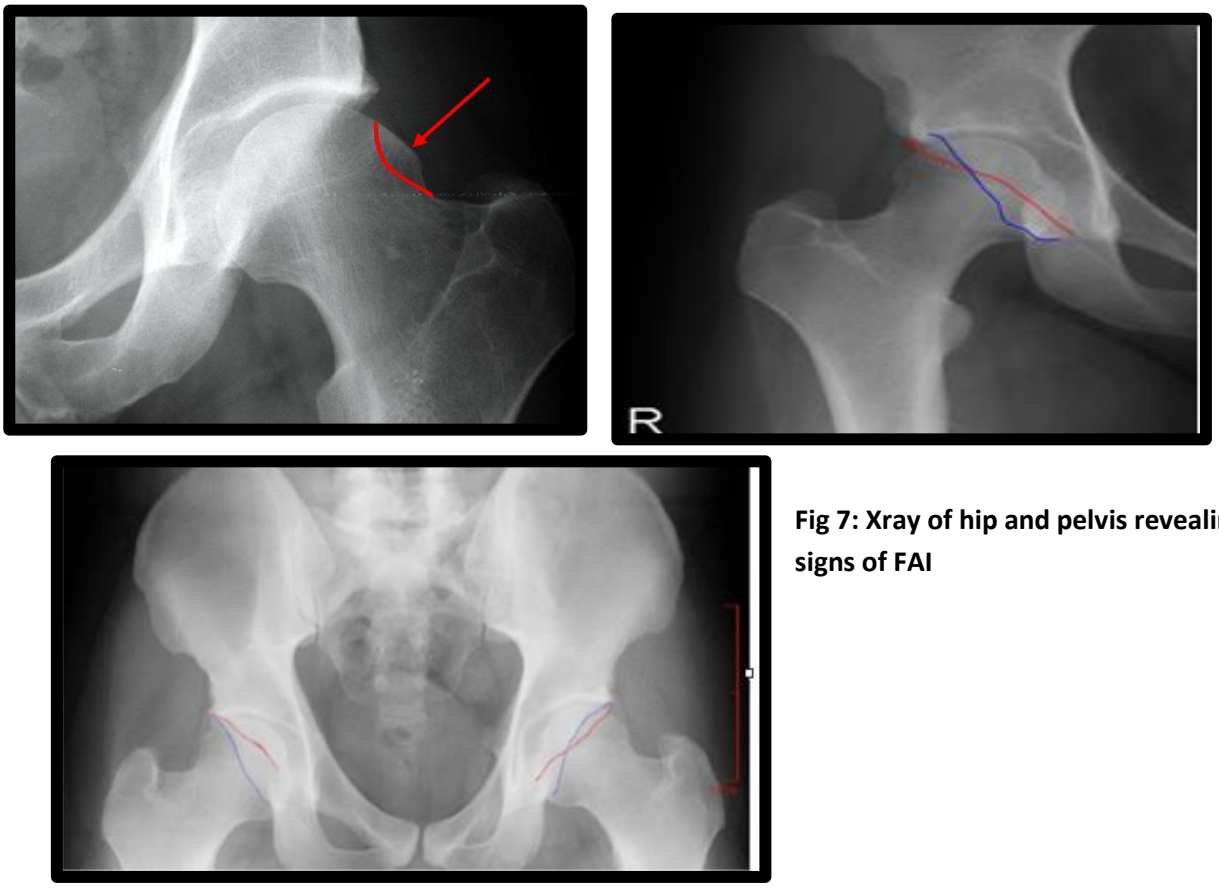


Fig 7: Xray of hip and pelvis revealing signs of FAI

CT Scans help show the exact shape of the bone and any abnormalities. CT scans can be very helpful when arthroscopic surgery is planned, if gives the surgeon a better idea of what needs to be done to reshape the bone **Fig 8:** CT scan figure (white circle showing bump on femur (ball))

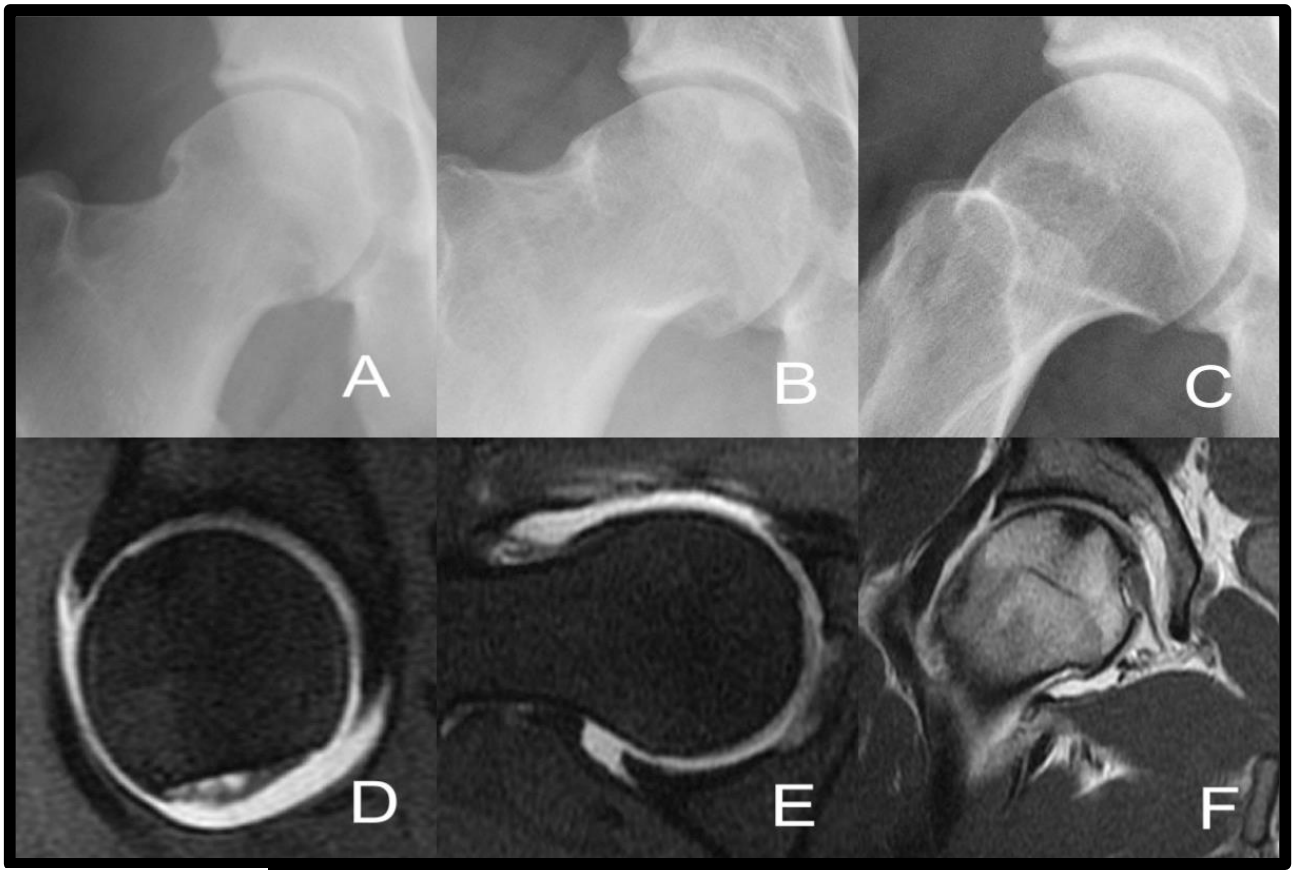


Fig 9: MRI of hip joint

MRIs can show any damage to the labrum but not necessarily any changes to the surface of the hip joint.

YOUR TREATMENT

PreHab Treatment

There is approximately a 12-24+ month wait to have FAI surgery. During this time, all patients should have some form of prehab education, and should be monitored during this time. It is common to have weakness and muscle imbalance as a result of having hip impingement for many years. The best non-operative treatment is to improve and strengthen any muscle imbalances/weakness. Common weakness will be in the hip flexor, abductors, glutes and hip rotators so exercises should be targeted to these areas. Gait may be affected, not so much in the early stages of impingement but as the disease progresses gait may become antalgic. It is important to avoid any movements that will recreate your symptoms, and all exercises should be pain free. Non-impact exercise such as stationary cycling and elliptical machines are great ways to keep the joint moving and maintain cardiovascular health. While cycling use an upright bike, not a recumbent and keep the seat high to avoid pinching at the joint surfaces. Swimming and water exercises are highly recommended pre and post-operatively. **All exercises should incorporate core strengthening. Avoid impact activities Such as running and exercises that involve deep hip flexion (i.e. squats)**

Post-Op Treatment

There is a specific protocol that will be provided to you for your treating therapist that outlines your rehab from Day zero. The main goals during **Phase 1 (0-2 weeks)** are: Protection - range of motion, ability to squeeze glute muscles, and proper walking pattern with crutches. The restrictions in this phase are no hip flexion past 90 degrees, no driving, no pivoting on surgical leg, and no prolonged sitting. **Phase 2 (2-6 weeks)** goals are: Mobility - regaining ROM and continue to increase glute strength. Restrictions remain the similar as phase 1. **Phase 3 (6-12 weeks)** - Regain Function - If you have a proper walking pattern your brace and crutches will be discharged at your 6 week follow up appointment. Goals for phase 3: regain hip strength and function with proper mechanics. **Phase 4 (12+ weeks)** - At this time goals vary with all patients and will be assessed at your 6 and 12 month reassessment. Other important timelines are: Return to work 3-6 months and return to sport 8 months.

Procedures

Acetabulum and/or Femoral Osteoplasty:

- **With Microfracture** - Microfracture is a technique used during hip surgery to treat articular cartilage defects associated with femoroacetabular impingement, instability, or traumatic hip injury. Articular cartilage covers the ends of bones in joints throughout the body. Acting as a barrier between connecting bones, normal cartilage is smooth allowing for easy gliding of the joint. When the cartilage is injured, the smooth surface can become rough, leading to delamination and tearing, which exposes the underlying bone. Microfracture is a technique that can be used to treat an articular cartilage injury. In this procedure multiple small holes are created in the bone at the base of the articular cartilage injury. These holes release bone marrow and allow blood into the injured area. Over time, this substance can help the regeneration of tissue called fibrocartilage which can fill in the original injured area of the cartilage. Fibrocartilage will help restore joint function and minimize symptoms such as pain and swelling.

- **With CarGel** - BST-CarGel enhances microfracture for the treatment of articular cartilage defects in the hip. It is a bio scaffold created from a mixture of chitosan glycerol phosphate and fresh autologous blood, that is injected into the damaged cartilage lesion, after performing the microfracture technique. When injected, the gelatinous material forms to any size or shape lesion and acts as a physical stabilizer in place of the damaged cartilage. BST-CarGel stimulates enhanced healing improved cartilage repair as proven on multiple human and animal studies.

- **With Capsular closure** - Capsular closure is a technique used to stitch together or tighten the hip joint. Performed at the end of the surgery, the capsule surrounding the joint is repaired or tightened to stabilize the hip joint.

- **With Psoas release** - Iliopsoas tendon is the largest hip flexor muscle. At the level of the hip joint, it is only 25% tendon and 75% muscle. Tight hip flexors can rub on the labrum and cause pain. If there is redness seen during surgery, release of the tendinous portion of this can help with the pain and not affect the hip flexor strength.

- **LABRAL REPAIR VS. LABRAL RECONSTRUCTION** - The labrum is a ring of soft tissue that lines the “socket” of the hip joint. The labrum may become damaged or torn as a result of bone impingement in FAI. There are two procedures that can be performed during hip surgery to fix the labrum, a labral repair or a labral reconstruction. In a labral repair the patient’s own injured labral tissue is reattached to the hip socket using sutures. In a labral reconstruction, the torn labrum is too damaged to be repaired so a donor tissue is used to replace the labrum to reconstruct the original anatomy of the hip.

FREQUENTLY ASKED QUESTIONS

1. **How long is the surgery?**
   This will depend on how much surgery is required in the joint. The surgery has two main goals, the first is to remove the excess bone growth on the ball or socket, the second is to repair the damage to the labrum. Typically, this surgery will last 1-2 hours.

2. **Where are the incisions?**
   This surgery is completely done arthroscopically, typically using two 1cm incisions; one is located on the anterior (front) hip, and the other on the lateral (outside) hip. Staples are used the close the incisions after the procedure is complete.

3. **Are there risks of having FAI surgery?**
   a. **Infection:** The risk of infection is reportedly about 0.8% and when recognized is treated with cleaning out the joint and antibiotics. Preventative measures are taken such as: cleansing of the skin prior to surgery, careful surgical techniques, small incisions, and pre-operative antibiotics. If an infection develops, you may require antibiotics.
   b. **Swelling:** Swelling around the joint is normal after FAI surgery. This can be alleviated by applying ice to the hip or using a cryotherapy device such as a Polar Care Unit. Elevating the legs and doing ankle pump exercises can also help decrease swelling.
   c. **Wound Healing Problems:** Incisions are quite small and therefore complications are rare. Occasionally blisters occur but these are usually treated with local dressing changes. Most wounds heal to a neat scar but a thickened, red and painful scar can occur and may require treatment.
   d. **Numbness:** Numbness in the groin, and top of foot can occur after surgery; this is caused by the traction applied to the hip during surgery. This does not affect the ability to use your leg, it affects your ability to feel the skin in that area (the affected area feels numb or hypersensitive to touch) this may take several weeks to disappear.
   e. **Blood Clots:** Blood clots (deep vein thrombosis) can develop after surgery. Patients at risk include patients with a family history of clotting, a history or prior clots, patients over 40, obesity, cigarette smoking, women, history of cancer, and immobility. Preventative measures include early mobilization, compression stockings, home care exercises such as ankle pumps, smoking cessation. If you or a direct relative has had a blood clot in the past, please advise the hospital before surgery. Long trips including air travel should be avoided in the first 7 days after surgery to minimize the risk of developing blood clots. **If you suddenly get short of breath and have chest pain after surgery, you need to go to the nearest emergency room or call 911 immediately. A pulmonary embolism is a medical emergency and can cause death.**

f. **Hip Stiffness:** Scar tissue can develop fast after hip surgery. Patients are instructed to start their post-surgical exercises within 2-3 days after surgery to stretch the capsule of the hip and maintain mobility.
g. **Injury to Artery or Nerve:** An injury to a major artery or nerve is rare after FAI surgery.
h. **Severe Pain:** Severe pain after surgery is rare but can occur. If you are experiencing excessive pain in the hospital, you may require to stay in recovery longer, if pain is not controlled, you may be admitted overnight. Medication will be prescribed for pain management.

4. **How long do I have my brace and crutches?**
   The hip joint and surrounded musculatures are not strong enough to support full function of the hip immediately after surgery. During the first 6 weeks after your surgery, you have the greatest risk of fracture and dislocation, the brace and crutches are required for the full 6 weeks to protect the hip from further injury.

5. **How do I sleep?**
   Sleeping in the brace can be very difficult. We recommend sleeping on your back or on your non-surgical side with a pillow between your legs.

6. **When can I shower?**
   You may shower 5 days after your surgery with a waterproof band aid over each incision.

7. **When can I drive?**
   You should never operate a vehicle while taking prescription medications; this can affect your ability to drive. The protocol will outline specifically when you are able to drive; generally, it is 6 weeks after your operation. It is very important you do not drive before it is safe to do so, if you are questioning this, please consult your doctor or your Physiotherapy Team.

8. **How long is physiotherapy and how often?**
   The goal of physiotherapy is to control pain and swelling, restore function, restore range of motion, strengthen, and prepare you for return to work or sport. This can vary from patient to patient; generally, physiotherapy will be 2-3xweekly for 12 weeks. It is very important you follow the recommended rehabilitation protocol outlined in physiotherapy unless you are advised otherwise. Patient progression through a rehabilitation program may be different between patients. Most patients will continue with home or gym-based exercise plans for 6-12 months.

9. **What happens after surgery?**

You will be seen 2-5 days after surgery for wound care and baseline measurements. Physiotherapy should be booked 5-7 days after surgery. You will be reassessed at regular intervals for 2 years after your surgery (typically the appointments are at 2 weeks, 6 weeks, 12 weeks, 6 months, 12 months and 24 months). At your 2 week appointment, you will have your staples removed and will be instructed to arrive one hour prior for x-rays.

10. **When can I return to work?**

Every patient will progress differently, generally a return-to-work program will begin after 12 weeks of physiotherapy. A return-to-work program may be set up for you, this may include modified duties or shortened hours. It is very important you follow the program set up by your therapy team, returning to work too quickly or without proper training can cause regression in recovery or cause re-injury to the hip.

11. **When can I return to sport?**

Return to sport will depend on the patient and the sport. Sport specific retraining is indicated between 4-6 months after surgery (pool program at 4 months; land training 5-6 months). The goal for return to sport is 9 months. It could take up to 2 years for maximum function and performance.

12. **Can I re injure my hip?**

Yes, it is possible to re injure your hip after surgery. This procedure can put you at risk for dislocation and femur head fracture. It is extremely important to follow the protocol outlined for you, this will minimize your chances of re injury.

13. **What is Psoas Tendonitis and how can it affect my hip post op?**

The hip flexor tendon travels along the front of the hip. If it is overused early in rehab (due to other muscles being weak, poor mechanics, over activity, etc.) the tendon can become inflamed and quite painful. It is important to try to avoid this as it will impact your rehab significantly. There is not any good treatment for this other than prevention; we can treat the front of the hip with various anti inflammatories to try and calm the tendon down before progressing through the rehab protocol. In some extreme cases, you will need to ambulate with crutches again until the tendonitis resolves, this can take upwards of 6-18 months.

FAI SURGERY CHECKLIST

Before Surgery:

- ☐ Make sure you have been working on regaining strength and mobility of the hip as well as core strength.
- ☐ You should know the date and location of your surgery.
- ☐ You should make arrangements with work/school that you will be missing time.
- ☐ You have been to your pre-operative appointment, and received your Hip brace, crutches, and other recommended surgical equipment.
- ☐ No liquids or food after midnight prior to surgery.

Day of Surgery:

- ☐ Bring your health card to the hospital
- ☐ Wear loose fitting clothing
- ☐ Bring all surgical equipment to the hospital
  - **Hip Brace**
  - **Crutches**
  - **Cold therapy unit + hip pad and barrier**
  - **Compression stockings**
- ☐ Bring all medications (or list of medications) that you take on a regular basis.
- ☐ If you have a sleep apnea machine, please bring it with you to the hospital.
- ☐ You will need transportation after surgery, and someone should stay with you for 24 hours after the surgery.

After Surgery:

- ☐ You should have a follow-up appointment booked within 2-5 days after surgery.
- ☐ You should have physiotherapy booked within 5-7 days after surgery, 2-3x week.
- ☐ You should have information on your 2 week follow up at the Orthopedic Clinic.

PREOPERATIVE APPOINTMENT

(WILL BE SCHEDULED MINIMUM 1 WEEK BEFORE SURGERY)

- SURGICAL CHECKLIST
- PREOP FORMS

PRE OP HIP CONSULTATION – DR. IVAN WONG

MINIMIZE INFLAMMATION AND SWELLING:

- BREG Polar Care Kodiak Cold Therapy Device (cryotherapy): 2-3 hours on, 40-60 minutes off - Instruction for use are with the unit.
- Ankle pumps will reduce the risk of blood clots and increase blood flow.
- **Compression stockings are recommended up to 6 weeks after surgery. These will reduce the risk of blood clots. Compression stockings are for daily use only and must be taken off at bedtime. **Washing instructions: hand wash/lay flat to dry.**
- Wound Care: wound must stay clean and dry at all times during the healing process. You will be unable to shower for the first 5 days until your dressing is removed. When your dressing is removed it will be replaced with a waterproof Band-Aid. You will be supplied a box of **XL Waterproof Band-Aids** to your 3-5 day follow-up appointment.
- You will need to see a doctor to have your staples removed 10 – 14 days after surgery. If you do not see Dr. Wong within 14 days after your surgery, you should make an appointment with your family doctor to have them removed.

POST-OP WALKING/MOBILITY:

- Symmetrical and full weight-bearing is the goal after surgery. We will be monitoring your gait at all your follow up appointments.
- When walking up and down stairs remember, **"good goes up, bad goes down"**
- If you are having a **cargel** procedure your weight bearing status will start at 20 percent and will change as you progress through the protocol. Specific instruction will be given to you pre and post operatively.
- Your brace and crutches are used for the first six weeks. This is to protect the hip from further injury.
- The brace is designed to control hip flexion and rotation. It is very important you avoid rotation of the hip and flexion greater than 90 degrees.

EARLY HIP ROM:

- **Maintaining range of motion in the hip is extremely important following your surgery.**
- Use an upright bike 20 minutes every day. This will be introduced at your 3 – 5 day follow up.
- Range of motion exercises will be done by your physiotherapist.
- Patient/family member taught how to safely perform hip circumduction (2-3 minutes , CW + CCW, 30 and 70 degrees flexion), 2-3x/day)
- Post-Op exercises: all instructions are on the exercise sheets attached; exercises are to be done 4 – 5 times a day.

FOLLOW-UP APPOINTMENTS:

- There will be a series of follow up appointments booked after surgery – these appointments will be given to you by Dr. Wong's office.
- **You will need to visit Apex Orthopedic Rehabilitation before every appointment with Dr. Wong.** This is to provide Dr. Wong with a progress report. These are set up to provide communication between our team, Dr. Wong, and your Physiotherapist.
- Follow up appointments will be at: **3-5 days, 2 weeks, 6 weeks, 12 weeks, 6 months, 12 months and 24 months.**
- **We ask that you bring your surgical report to your 3-5 day post op visit.**
- Physiotherapy should start at 5 days after surgery (2 x per week).

HIP BRACE INFORMATION:

- This BREG Hip brace will give post operative support and protection, as well as limit range of motion to control hip flexion and extension.
  - You brace should be set to allow 90° Flexion and -10° Extension.
  - Your brace is to be worn at all times for six weeks. It can only be taken off to shower and for dressing. It must be worn when doing your exercises.
  - Your brace must be hand washed, using soap and water.
    Placing straps or pads in the washing machine can ruin the Velcro.
- You are required to wear your brace while sleeping. You must sleep on your back or on your nonoperative side, with a pillow between your knees

Pre-Op Physiotherapy Assessment

(to be completed by Physiotherapist at Apex Orthopedic Rehabilitation)

BASELINE MEASUREMENTS: ROM/Strength (with dynamometer (LBS))

MOVEMENT	ROM	STRENGTH	MOVEMENT	ROM	STRENGTH
HIP ABDUCTION			HIP INTERNAL ROTN		
HIP FLEXION			HIP EXTERNAL ROTN		
HIP EXTENSION			HIP ADDUCTION		
	OUTCOME SCORE:				

CHECKLIST

☐	*Review of surgery and answer questions (remind potential of groin/saddle region numbness, soreness/numbness on ankle)*	*Surgical Date:*
☐	*Importance of early movement and exercises – protect hip for 2 weeks then use as normal (pain free)*	
☐	*Review exercises to begin as soon as possible – will need someone to assist with PROM hip circles -4-6x/day*	
☐	*Overview of protocol, return to work 3-6 months, return to sport (8-12 months)* *No Driving while on crutches/in brace*	
☐	*Plan for physiotherapy – ideal: 2-3x/week for 6 weeks, 1x/ until 10 weeks, biweekly until 3-4 months, every 6-8 weeks until 1 year*	*Location:*
☐	*Follow ups with rehab team and Dr Wong 2 weeks, 6 weeks, 12 weeks, 6 months, 1 year, 2 year. Importance of doing outcome measure (emailed to patient).*	*2 week date:* *6 week date:*
☐	*Schedule 2-5 day appointment*	*Date:*
☐	*Provide hip booklet*	
☐	*Provide contact information (drwongrehab@apexorthorehab.ca)*	

I acknowledge that all of the above information has been provided to me and that I was able to discuss any questions I had with the providing physiotherapist.

Patient Name: _____ Signature: _____

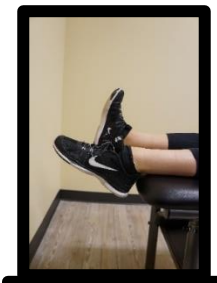
Physiotherapist Name: _____ Signature: _____

EXERCISES TO BEGIN AS SOON AS POSSIBLE AFTER SURGERY

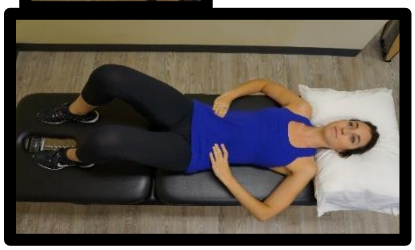
Upright Bike - *10 minutes, 2-3x/day*

High seat, no resistance – for the first 2 weeks use mainly non-operative leg for cycling.
Stand on the same side of the bike as your surgical leg. Place your NON SURGICAL leg over the bike and mount. You are safe to completely weight bear through your surgical leg. Dismount the bike by coming down off the bike on your surgical side, take a large step out with your SURGICAL followed by your nonsurgical.

Prone Laying - 20 minutes, 2-3x/day
Lay on stomach (can prop up on elbows) – NOT push/press up, rest in this position.



Ankle Pumps – Several times daily
Pump feet up and down continuously.



Transverse Abdominus with Pelvic Tilt – 10 reps, 3-5 secs hold, 3 sets, 2x/day

Gently tighten your abdominal muscles, like you're drawing your midsection to your belly button. Add anterior and posterior pelvic tilt following contraction-by arching and flattening your back through the movement of your pelvis.

Hip Circles - *5 min CW, 5 min CCW 4x/day*

Have your assistant hold your knee and ankle, have them move your knee towards you to 70° **(A),** in this position with you *completely relaxed*, have them move your hip in gentle circles (NO ROTATION). Repeat again with your leg at 30° **(B).**

Glute Setting - 15 reps 3 sets 5second hold, 3x/day
Squeeze buttocks – do not tighten muscles in front of hip, do not dominate with hamstring. Feel your muscle tighten with your hands.

Hip Flexor Stretching – 30 sec hold, 4-5x/day

Place NON SURGICAL leg on chair, lean forward to feel a stretch in the front of your SURGICAL leg.

DR I. WONG HIP ARTHROSCOPY REHAB PROTOCOL

DR I. WONG HIP ARTHROSCOPY REHAB PROTOCOL
PHASE 1A (Protection): *0-2 WEEKS*

Goals

- ✓ Protection of hip to prevent infection/damage
- ✓ Education (posture, restrictions, ADL's)
- ✓ Full weight bearing (unless CarGel or Microfracturing – see 2nd page of protocol for specific weight bearing for these procedures)
- ✓ Regain ROM within guidelines, isometric glute contraction, and ideal walking pattern

Restrictions

- x Use of brace and crutches at all times
- x 90 °restriction for flexion, rotation only in prone
- x No driving
- x Incisions cannot get wet
- x No twisting or pivoting

0-2 Week Checklist

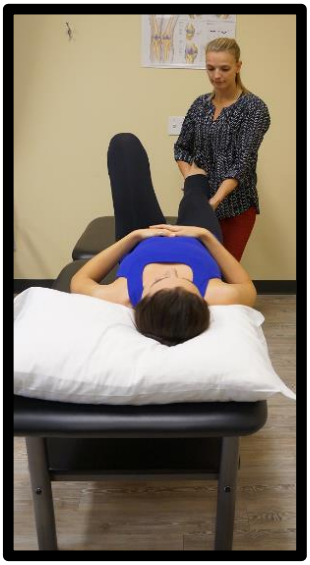
- ☐ Daily circumduction at home (10 min 4x/day)
- ☐ Upright bike
- ☐ Prone lying
- ☐ Transverse abs
- ☐ Glute activation
- ☐ Hip flexor stretch
- ☐ Ankle pumping

DR I. WONG HIP ARTHROSCOPY REHAB PROTOCOL
PHASE 1A (Protection): *0-2 WEEKS*

MANUAL THERAPY (3-4 X/WEEK)

CIRUMDUCTION/PENDULUM ROTATION (see picture)
(continue until full pain free ROM is restored)

- 10 min @ 30° of flexion (5 min CW/5 min CCW)
- 10 min @ 70-90° flexion (5 min CW/5 min CCW)



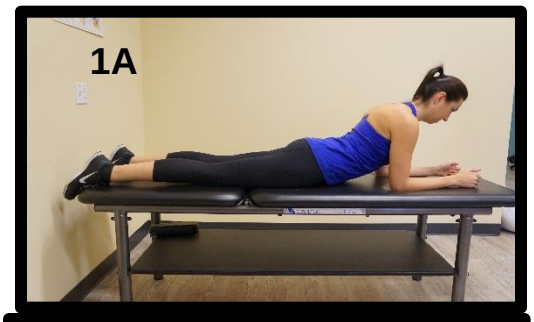
PROM RESTRICTIONS *

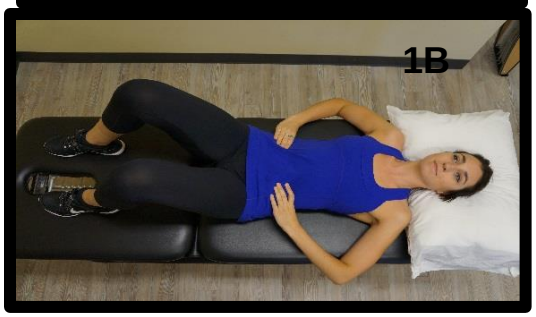
- Flexion 90°
- Side lying extension 15°
- Abduction 30°
- Internal rotation (20° @ 90° flexion, no prone restriction)
- External rotation (20° @ 90° flexion and prone)

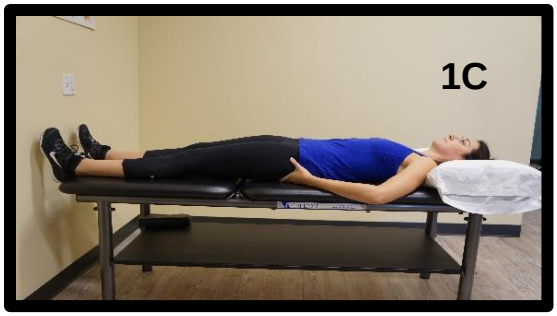
*All AROM and PROM should be in pain free ranges and without complaints of pinching

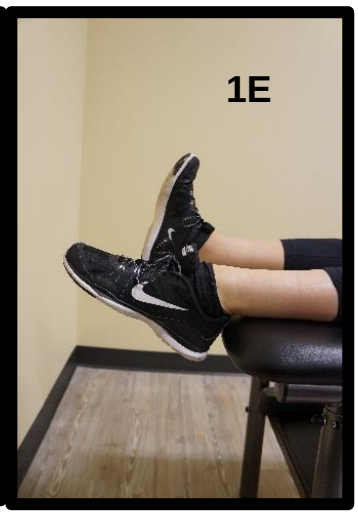
ACTIVE EXERCISE PROGRAM (DAILY)

- ☐ Upright Bike 10 mins 2x/day – High Seat, NO pinch
- ☐ Prone Lying 20 minutes twice/day **(A)**
- ☐ Transverse Abdominus with pelvic tilt **(B)**
- ☐ Gluteus activation (10 reps, 3 sets, 2x/daily) **(C)**
- ☐ Hip Flexor stretch (30-45 sec, 2-3 reps, 2x/day) **(D)**
- ☐ Ankle pumping (Several times daily) **(E)**
- ☐ Assisted circumduction (pictured above)
- ☐ Functional Retraining – proper gait patterns with crutches (equal stride length, no hip flexor dominance)
- ☐ AROM in pain free ranges









PAIN AND INFLAMMATORY CONTROL

- Ankle pumping and leg elevation
- Ice or cryotherapy
- Anti-inflammatory modalities as required (IFC or TENS only)
- Compression socks – 6-week duration **(removed at night)**
- Proper resting position – neutral hip rotation

Please take note of potential procedures that may have been completed on your patient and will alter their rehab. A check mark in the box will indicate the patient has received this procedure.

□ Patient has had micro-fracturing of their femoral head during surgery. This procedure involves small holes drilled into the bone marrow allowing cells to enter the joint and generate a form fibrocartilage.

Restrictions/indications:

- 20% WB for 6 weeks – continue to optimize gait pattern with crutches
- **Pool therapy** when staples have been removed (**approx. 2 weeks**) and incisions have healed over - full weight bearing with water at shoulder level.
- Please consult Physiotherapist on exercise modifications

□ Patient has had BST-CarGel on their acetabular cartilage weight bearing dome. BST-CarGel acts as a structured frame and encourages the repair cells located inside the bone below the cartilage to travel into the damaged area and become new cartilage cells.

Restrictions/indications:

- 20% WB for 7 weeks – continue to optimize gait pattern with crutches
- At 8th week post-op can progress to 50% WB
- At 9th week post-op can progress to 75% WB
- At 10th week post-op can progress to 100% WB
- **Pool therapy** when staples have been removed (**approx. 2 weeks**) and incisions have healed over - full weight bearing with water at shoulder level.
- Please consult Physiotherapist on exercise modifications

□ Patient has had Abductor Muscle Repair

Restrictions/indications:

- 20% WB for 6 weeks, continue to optimize gait pattern with crutches
- No active hip abduction for 6 weeks
- **Pool therapy** when staples have been removed (**approx. 2 weeks**) and incisions have healed over - full weight bearing with water at shoulder level.
- Please consult Physiotherapist on exercise modifications

With all the above procedures please follow the FAI with/without labral repair protocol modifying only for restrictions listed above

Phase 1A Exercise Descriptions

1A Prone Lying – 20 minutes 2x/day

Laying on stomach, if able, prop up on elbows and relax in that position. DO NOT DO PRESS UP/PUSH UP.

1B Transverse Adominus with pelvic tilt – 10 reps, 3-5 second hold, 3 sets, 2x/day

Gently tighten your abdominal muscles, like you are drawing your mid-section to your belly button. Add anterior and posterior pelvic tilt following contraction – by arching and flattening your back through the movement of your pelvis.

1C Gluteus Activation – 10 reps, 3-5 second hold, 3 sets, 2x/day

Contract your buttocks muscles by drawing them together. Do not dominate movement with hamstring and do not feel any contraction in the front of your hip.

1D Hip Flexor Stretch – 2-3 reps, 30-45 sec hold, 3-4x/day

Holding on to your crutches, place your NON SURGICAL leg on a stable chair lean forward to feel a stretch in your SURGICAL leg. DO NOT LIFT SURGICAL LEG TO CHAIR

1E Ankle Pumping – Several times daily

Pump ankles up and down repeatedly

DR I. WONG HIP ARTHROSCOPY REHAB PROTOCOL

PHASE 1B (PROTECTION/ACTIVATION): 2-4 WEEKS

Goals

- ✓ Restore ROM of full flexion, abduction, extension.
- ✓ Rotation and ROM within guidelines
- ✓ No pain/pinching with PROM
- ✓ Regain pelvic control and isometric strength of the hip and pelvis

Restrictions

- x External Rotation – restricted to 20° in prone *
- x No driving
- x Brace/Crutches as directed
- x No active release techniques

***** no restrictions on internal or external rotation in supine

2-4 Week Checklist

- ☐ Remove 90-degree stop on brace
- ☐ Pool therapy
- ☐ Massage therapy at 3wks

Exercise Checklist

- ☐ Glute progressions
- ☐ Daily circumduction (4x/day)
- ☐ Hip isometrics
- ☐ Double leg bridge
- ☐ Single leg balance
- ☐ Quadriceps isometrics
- ☐ Short arcs

DR I. WONG HIP ARTHROSCOPY REHAB PROTOCOL
PHASE 1B (Protection/Activation): *2-4 WEEKS*

MANUAL THERAPY (3-4X/WEEK)

CIRUMDUCTION/PENDULUM ROTATION (see picture)
(continue until full pain free ROM is restored)

- 10 min @ 30° of flexion (5 min CW/5 min CCW)
- 10 min @ 90° flexion (5 min CW/5 min CCW)

SOFT TISSUE TECHNIQUES (as needed)

- Iliopsoas, ITB, TFL, Adductors, Gluteus Medius

PHYSIOTHERAPIST ASSISTED STRETCHING

- Prone quadriceps

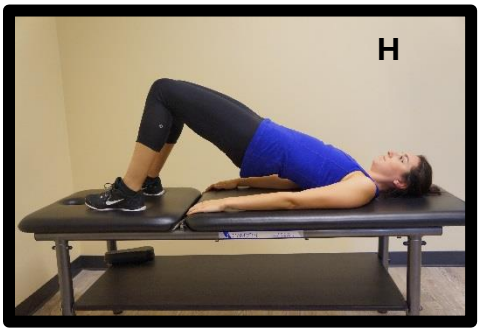
RESTORE **ALL** PROM RANGES*, ONLY RESTRICTIONS:

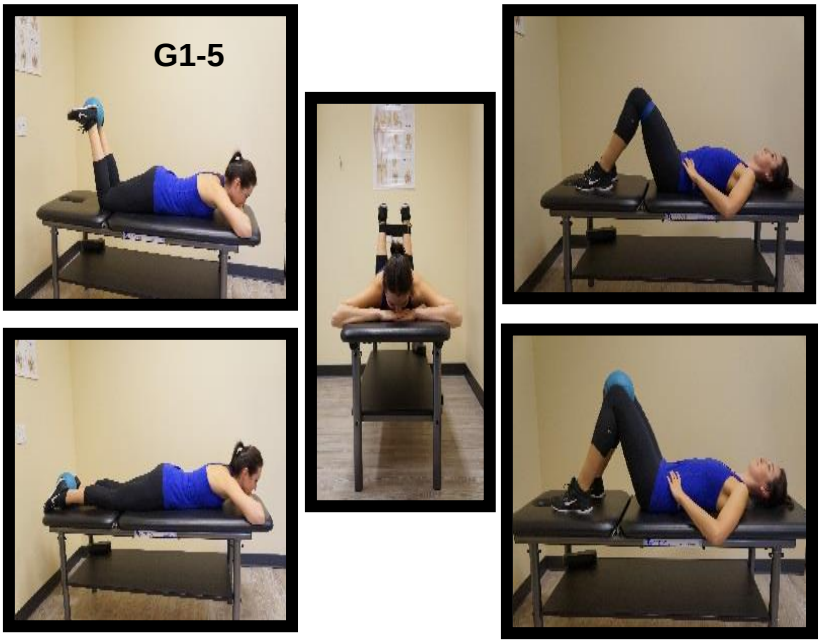
- External rotation (20° in prone)

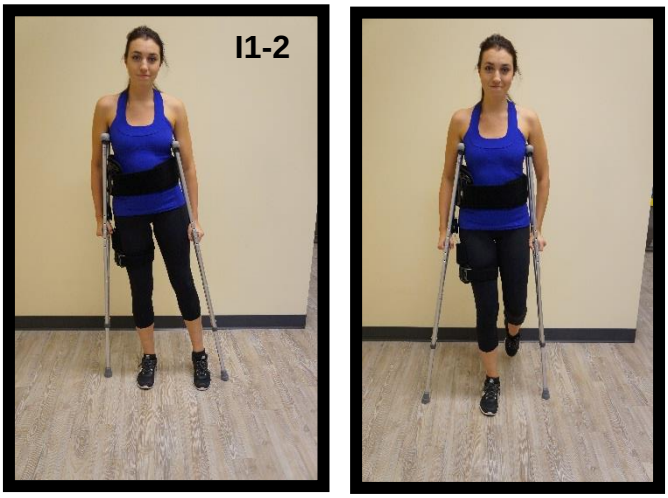
*All PROM should be in pain free ranges without complaints of pinching

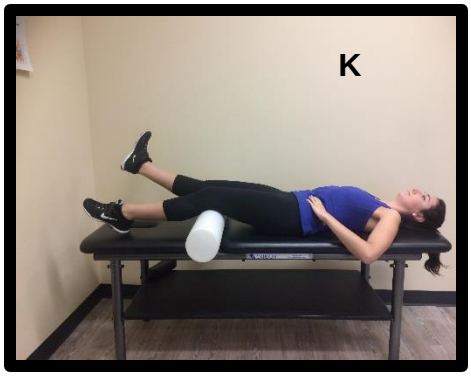
ACTIVE EXERCISE PROGRAM (DAILY)

- ☐ All exercises from Phase 1A
- ☐ Gluteal Progressions **(F1-3)**
- ☐ Hip Isometrics **(G1-5) (week 3 if no pain)**
- ☐ Double Leg Bridges **(H)**
- ☐ Weight Shift progress to single leg balance**(I1-2)**
- ☐ Quadriceps isometrics **(J)**
- ☐ short arcs **(k)**









AQUATIC THERAPY

Begin when staples have been removed and no open wounds (approximately 2-3 weeks)

Book aquatic physiotherapy session in Halifax Regional Municipality with drwongrehab@apexorthorehab.ca or by calling (902) 835-2932

CRITERIA TO PROGRESS TO PHASE 1C

- ☐ Greater than 100° flexion without pain/pinching
- ☐ No Trendelenburg
- ☐ Completion and independent with all phase 1A/B exercises and progressions
- ☐ Ambulating with proper patterns – no compensatory patterns, pains, etc.
- ☐ No resting pain or inflammation

Phase 1B Exercise Descriptions

1F Gluteal Progressions -10 reps, 3-5 second hold, 3 sets, 2x/day

F1: In ½ kneeling with surgical knee on table squeeze buttocks muscle
F2: in full kneeling squeeze buttocks muscle
F3 In standing squeeze buttocks muscle

- *IF patient is having difficulty contracting glutes add NMES for these exercises*

1G Hip Isometrics -10 reps, 3-5 second hold, 3 sets, 2x/day (3 weeks if no pain)
G1: Laying on your stomach, place ball between feet, bend knees and gently push legs into ball feeling a small contraction in the glute
G2: Laying on your stomach, place ball between feet (or knees) and gently push into ball
G3: Laying on your stomach, place belt (NOT RESITANCE BAND) around ankles and gently push out
G4: Laying on your back, place belt (NOT RESISTANCE BAND) above knees and gently pushout
G5: Laying on your back, place ball between knees and gently push in

1H Double leg bridges- 10 reps, 3-5 second hold, 3 sets, 2x/day
Laying on your back with knees bent and arms by your side. While maintain a core contraction, squeeze your glutes gently and push your torso up by pushing your weight through your heels.

1I Weight Shifting - 10 reps 5-10 second hold, 3 sets, 2x/day
Standing with crutches slide your weight to your surgical side hold and return. Progress to standing on one leg (if no Trendelenburg is present).

1J Isometric Quadriceps -10 reps, 3-5 second hold, 3 sets, 2x/day
Laying on your back, squeeze the muscle on top of your leg, hold and relax

1K Short Arc Quads 10 reps, 3-5 second hold, 3 sets, 2x/day
Laying on your back, place a roll under your knee, squeeze the muscle on top of your leg and lift heel off of ground, hold and relax

DR I. WONG HIP ARTHROSCOPY REHAB PROTOCOL

PHASE 1C (Mobility) *4-6 WEEKS*

Goals

- ✓ Full ROM pain free/No Pinch
- ✓ Regain PROM multi-directional movements
- ✓ Regain correct pelvic/spinal alignment
- ✓ Improve neuromuscular control, stability & endurance

Restrictions

- x Continue with brace/crutches as prescribed
- x No jumping, twisting, running
- x Avoid aggressive traction/manipulation on the joint

4-6 Week Exercise Checklist

- ☐ ITB Stretch
- ☐ Kneeling Hip Flexor Stretch
- ☐ Prone Hip Extension
- ☐ Side-lying Hip Abduction
- ☐ Hip Hikes
- ☐ Leg Press
- ☐ 4pt Rock back
- ☐ Neutral clamshell
- ☐ 2-4 weeks' exercises as needed

DR I. WONG HIP ARTHROSCOPY REHAB PROTOCOL

PHASE 1C (Mobility): *4-6 WEEKS*

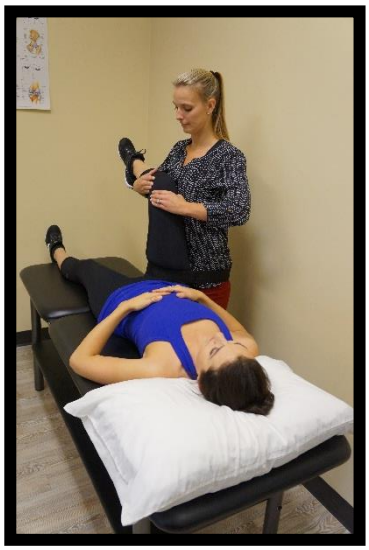
MANUAL THERAPY (2-3X/WEEK)

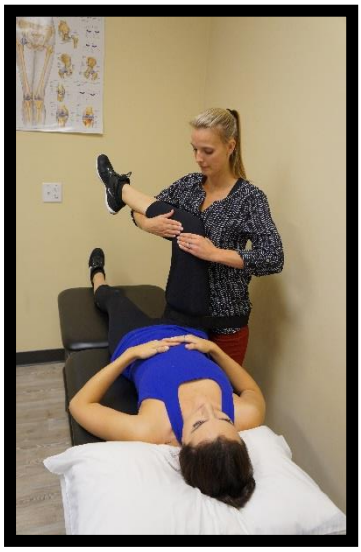
Multi-directional movements

- PT assisted FABER slides
- Thomas Stretching
- Manual Joint (hip/sacrum/spinal) Mobilizations (as needed week 5)

All manual therapy – avoid aggressive traction/no significant pain

PT assisted FAbER slides





PT manual mobs (with belt) as needed (week 5)

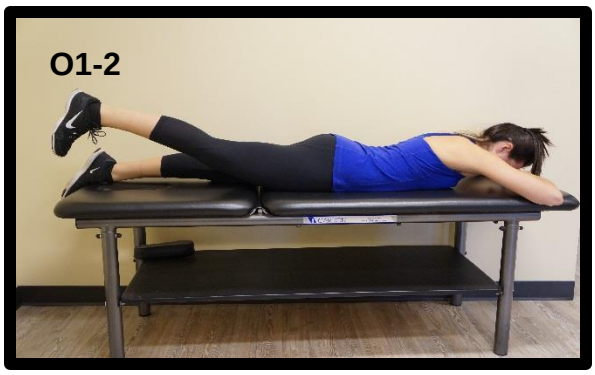
PT Thomas Stretching

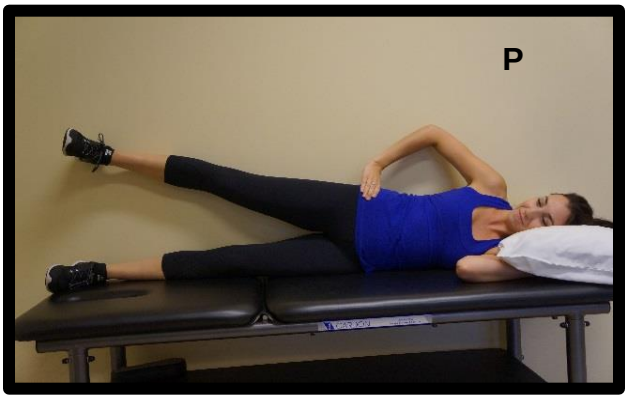
ACTIVE EXERCISE PROGRAM (DAILY)

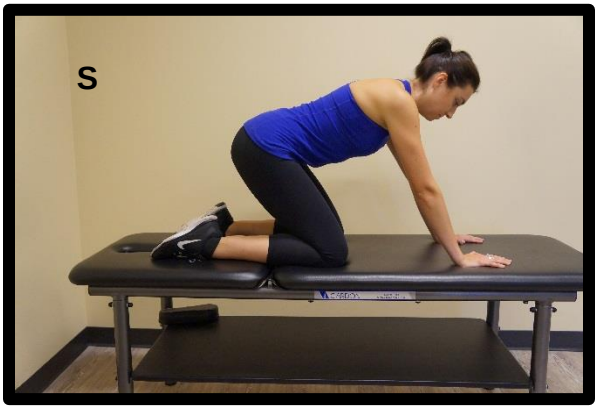
Progress from IB to the following exercises when appropriate

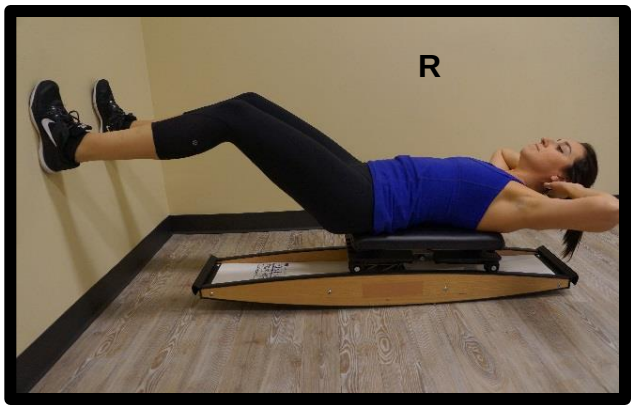
- ☐ Upright bike 20 mins minimum resistance
- ☐ IT band stretching **(M)**
- ☐ Kneeling Hip flexor stretch **(N)**
- ☐ Prone hip extension **(O1-2)**
- ☐ Neutral flexion clamshells (**if no pain**) **(L)**

- ☐ Side-lying hip abduction **(P)**
- ☐ Hip Hikes **(Q)**
- ☐ Leg press (12 reps, 3 sets, 2x/day **(R)**
- ☐ 4pt rockback +/- rotation **(S)**









AQUATIC THERAPY

Continue to progress through aquatic therapy – book appointment to be shown new exercises

Phase 1C Exercise Descriptions

1L Neutral Flexion Clamshells 10 reps, 3-5 second hold, 3 sets, 2x/day (week 3 if no pain)
Lay on your side with your knees in line with your hip, gently squeeze glutes and lift your top knee off of your bottom. Contraction/tightening should be felt over the top of you buttocks – not in the front of your hip

1M IT Band Stretching – 30-45 second hold, 3 reps, 2x/day
Place surgical leg behind opposite leg, raise surgical side arm above head leaning away to feel a stretch on the side of your surgical leg

1N Kneeling hip flexor stretching – 30-45 second hold, 3 reps, 2x/day
½ kneel on mat/floor with your surgical knee on ground. Keeping shoulders and pelvis aligned gently lean forward to feel a stretch in the front of your surgical leg

1O1-2 Prone hip extension – 10 reps 3-5 second hold, 3 sets, 2x/day
1O-1 Laying on stomach, bend surgical knee. Keeping core tight, squeeze buttocks gently while lifting leg off of table. Keep pelvis stable during the movement.
1O-2 Laying on stomach, keeping core tight - lift knee off of table and relax. Keep pelvis stable during the movement

1P Side lying hip abduction 10 reps 3-5 second hold, 3 sets, 2x/day
Laying on your non surgical side (best to do against a wall), push bottom hip against the wall, press heel gently into wall with your surgical leg then slide your leg up the wall. Focus on squeezing the upper part of your buttocks – not the front of the hip.

1Q Hip Hikes – 10 reps 3-5 second hold, 3 sets, 2x/day
Stand on step with surgical leg off of step. Keep both knees straight. Let your surgical leg fall toward the floor (just slightly), using your glute muscles pull your surgical leg up.

1R Four point rock backs – 10 reps 3-5 second hold, 3 sets, 2x/day
Kneeling on all fours, keeping spine in proper alignment slowly rock your buttocks towards your heels (do not round spine). Repeat with hip rotated inwards and again with hip rotated outwards.

1S Leg Press – 10 reps 3-5 second hold, 3 sets, 2x/day (very light – minimal weight)
Either in a leg press machine or laying on a pro fitter, place feet on platform/wall in line with your knees. Squeeze your buttocks to push yourself away from the platform/wall.

CRITERIA TO PROGRESS TO PHASE 2

- ☐ Full pain free PROM flexion without pain/pinching
- ☐ Greater than 115° AROM flexion without pain/pinching
- ☐ Completion and independent with all Phase 2 exercises and progressions
- ☐ Ambulating with proper patterns without crutches – no compensatory patterns, pains, etc.
- ☐ Follow up with Dr. Wong completed at 6 weeks
  Date:_____

DR I. WONG HIP ARTHROSCOPY REHAB PROTOCOL

PHASE 2A (Neuromuscular Retraining): *6-8 WEEKS*

Goals

- ✓ Regain strength (functional & motor control)
- ✓ Improve cardiovascular endurance
- ✓ Optimize balance/proprioception

Restrictions

- x No running, jumping, twisting,

6-8 Week Exercise Checklist

- ☐ Elliptical 20-30 minutes
- ☐ FABER Slides
- ☐ Wall Squats
- ☐ Eccentric Hip Flexor
- ☐ Standing Rotation
- ☐ Step & hold
- ☐ Side Step +/- Band
- ☐ Appropriate exercises from Phase 1

DR I. WONG HIP ARTHROSCOPY REHAB PROTOCOL
PHASE 2A (Neuromuscular Retraining): *6-8 WEEKS*

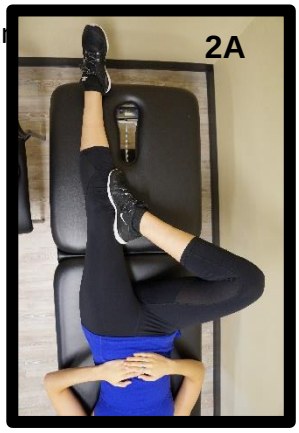
MANUAL THERAPY (1-3x/week)

PROM AND PHYSIOTHERAPIST STRETCHING (as needed)

SOFT TISSUE TECHNIQUES (as needed)

ACTIVE EXERCISE PROGRAM (DAILY)

- ✓ Cardiovascular – Upright bike and/or elliptical with r resistance 30-60 minutes
- ✓ FABER slides (unassisted if NO pinch) (2A)
- ✓ Wall Squats (2B)
- ✓ Eccentric hip flexor (2C)
- ✓ Standing Rotation (2D)
- ✓ Step and Hold (2E)
- ✓ Side step +/- band (2F)
- ✓ Continue appropriate exercises from Phase 1c



Phase 2A Exercise Descriptions

2A FABER slides 10 reps 2-3 sec hold, 3 sets 2x/day
Place surgical heel on the heel of your opposite heel (with knee bent), with knee as close to floor/mat as possible keep core contracted while you slide your heel towards your groin. Do not allow your hip to rotate. NO PINCH

2B Wall Squat 10 reps 2-3 sec hold, 3 sets 2x/day
With your back against the wall, have feet placed in front of you. Slide down the wall (make sure your knees do not go over your toes), push through heels to slide yourself back to starting position

2C Eccentric Hip flexion 10 reps 2-3 sec hold, 3 sets 2x/day
Wrap resistance band around top of hip and secure to pole in front of you. Sit on ball (have therapist spot you during this movement), keeping core tight, slowly lower yourself down. With assistance from physiotherapist return to starting position.

2D Standing rotations 10 reps 2-3 sec hold, 3 sets 2x/day
Holding a light weight, keep your core tight. Rotate weight away from surgical leg. Be sure not to allow hip to move

2E Step and Hold 10 reps 2-3 sec hold, 3 sets 2x/day
Standing in position, take a step forward hold and return.

2F Side step +/- band 10 reps 3 sets 2x/day
With or without band wrapped above knee, have knees slightly bent, take a small step to the side – repeat in opposite direction

AQUATIC THERAPY

Continue to progress through aquatic therapy – book appointment to be shown new exercises

Book aquatic physiotherapy session in Halifax Regional Municipality drwongrehab@apexorthorehab.ca or by calling (902) 835-2932

CRITERIA TO PROGRESS TO PHASE 2B

- ☐ Full pain free ROM (all directions) of hip
- ☐ Completion and independent with all phase 3 exercises and progressions with no pain
- ☐ Ambulating device free without pain or limp
- ☐ Able to do normal activities of daily living with minimal pain

DR I. WONG HIP ARTHROSCOPY REHAB PROTOCOL
PHASE 2B (Functional Strengthening): *8-12 WEEKS*

Goals

- ✓ Regain strength (functional & uni-pedal)
- ✓ Improve cardiovascular endurance
- ✓ Optimize balance/proprioception

Restrictions

- x No running, jumping, twisting

8-12 Week Exercise Checklist

- ☐ Upright bike/Elliptical moderate resistance 30-60 minutes
- ☐ Uni-pedal leg press
- ☐ Straight leg raise
- ☐ Bridge Progressions
- ☐ Golfers lift
- ☐ Free squat
- ☐ Static lunge
- ☐ Iliopsoas/TFL/rotator stretch progressions
- ☐ Single leg stance progressions
- ☐ Appropriate exercises from phase 2A

DR I. WONG HIP ARTHROSCOPY REHAB PROTOCOL

PHASE 2B (Functional Strengthening): *8-12 WEEKS*

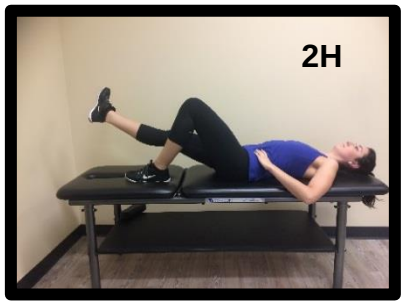
MANUAL THERAPY (as needed)

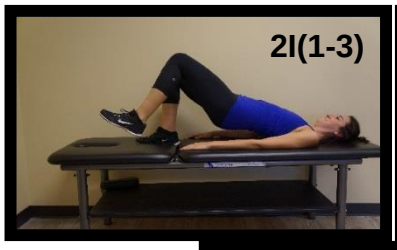
PROM AND PHYSIOTHERAPIST STRETCHING (as needed)

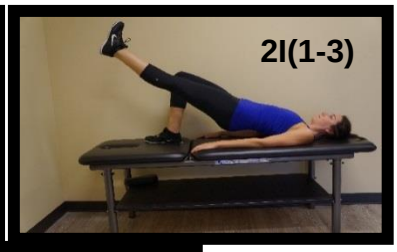
SOFT TISSUE TECHNIQUES (as needed)

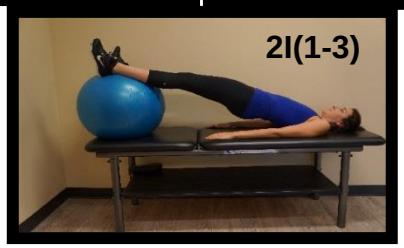
ACTIVE EXERCISE PROGRAM (3-5x/week)

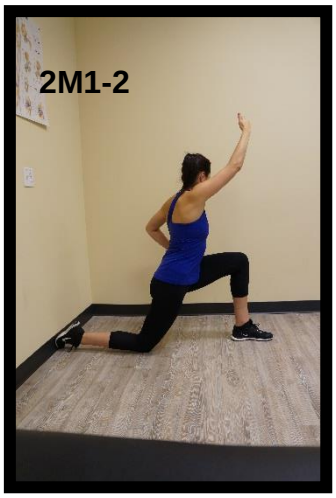
- ✓ Cardiovascular – Upright bike and/or elliptical with moderate resistance 30-60 minutes
- ✓ Uni-pedal leg press (2G)
- ✓ Straight Leg raise (2H)
- ✓ Bridge progressions (2I1-3)
- ✓ Golfers lift (2J)
- ✓ Free Squat (2K)
- ✓ Static lunge (2L)
- ✓ Iliopsoas/TFL/rotator stretch progressions (2M 1-2)
- ✓ Single leg stance progressions (2N1-2)











Phase 2b Exercise Descriptions

2G Unipedal leg press – 10 reps 2-3 sec hold, 3 sets, 2x/day
Continue with leg press set up in phase 2. Perform with only your surgical leg (be sure to drop weight down before attempting)

2H Straight Leg Raise - 10 reps 2-3 sec hold, 3 sets, 2x/day
Laying on your back with knees bent, straighten your surgical leg. Rotate foot out just slightly. Keeping core contracted lift leg off of table slightly.

2I1-3 Bridge Progressions - 10 reps 2-3 sec hold, 3 sets, 2x/day
2I-1 – Set up same as bridge from previous phase. After you lift your torso, keep core activated and lift surgical leg off of table. Relax. Repeat with opposite leg
2I-2 – Set up same as bridge from previous phase. After you lift your torso, keep core activated and lift surgical leg off of mat/floor and straight out in front of you. Relax. Repeat with opposite leg
2I-3 – Using a ball under the feet repeat initial bridge form

2J Golfers Lift - 10 reps 2-3 sec hold, 3 sets, 2x/day
Stand with knee bent slightly, rock body forward while straightening your leg behind you. Keep pelvis stable and lumbar spine position maintained. Repeat on opposite leg.

2K Free Squat - 10 reps 2-3 sec hold, 3 sets, 2x/day
Standing with knees bent slightly. Lower yourself down into squatting position. Do not hinge or lose spinal position. Helps to envision as if you were going to sit on a chair behind you.

2L Static Lunge - 10 reps 2-3 sec hold, 3 sets, 2x/day
Place surgical leg in front of you, keep shoulders above hips, maintain core contraction, lower yourself toward floor. Do not allow your knee to go beyond your toes. Repeat with opposite leg in front.

2M 1-2 Iliopsoas/TFL/Rotator Stretch progressions 30-45 second hold, 3 reps, 2x/day
2M-1 – In the same set up previous hip flexor stretch, place your arm above your head and gently rotate away from surgical side.
2M-2 – In same set up as above, only your surgical foot is lifted and resting on wall/small step, etc.

2N1-2 Single Leg stance progressions 5-6 reps, 30 second holds, 2x/day
Progress single leg stance exercise by standing on pillow, bosu ball, etc.

AQUATIC THERAPY

Book appointment to be provided with new exercises.

Book aquatic physiotherapy session in Halifax Regional Municipality with drwongrehab@apexorthorehab.ca or by calling (902)835-2932

CRITERIA TO PROGRESS TO PHASE 3

- ☐ Hip flexion strength 20 lbs of force (pain free)
- ☐ Completion and independent with all phase 4 exercises and progressions with no pain
- ☐ Able to do normal activities of daily living without pain
- ☐ Able to perform single leg stance, squat, and lunge without knee valgus position
- ☐ Follow up with Dr Wong completed at 12 weeks

Date:_____

DR I. WONG HIP ARTHROSCOPY REHAB PROTOCOL PHASE 3 (Advanced Strengthening): *3-4 months*

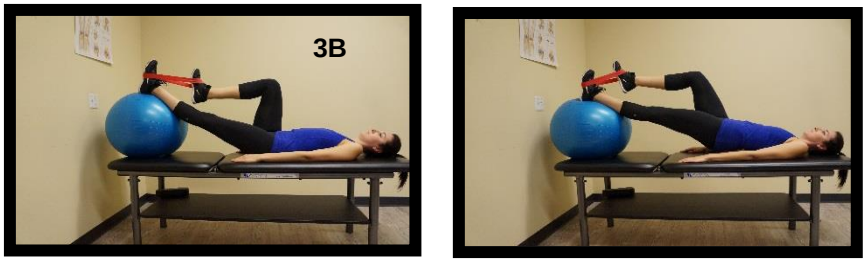
MANUAL THERAPY (as needed)

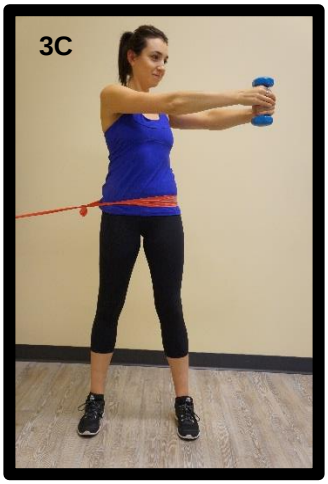
PROM AND PHYSIOTHERAPIST STRETCHING(asneeded)

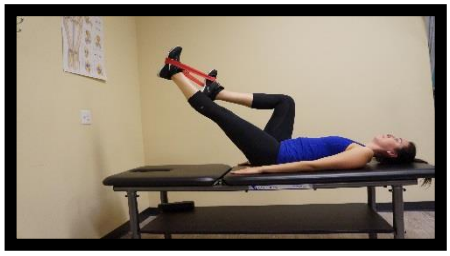
SOFT TISSUE TECHNIQUES (as needed)

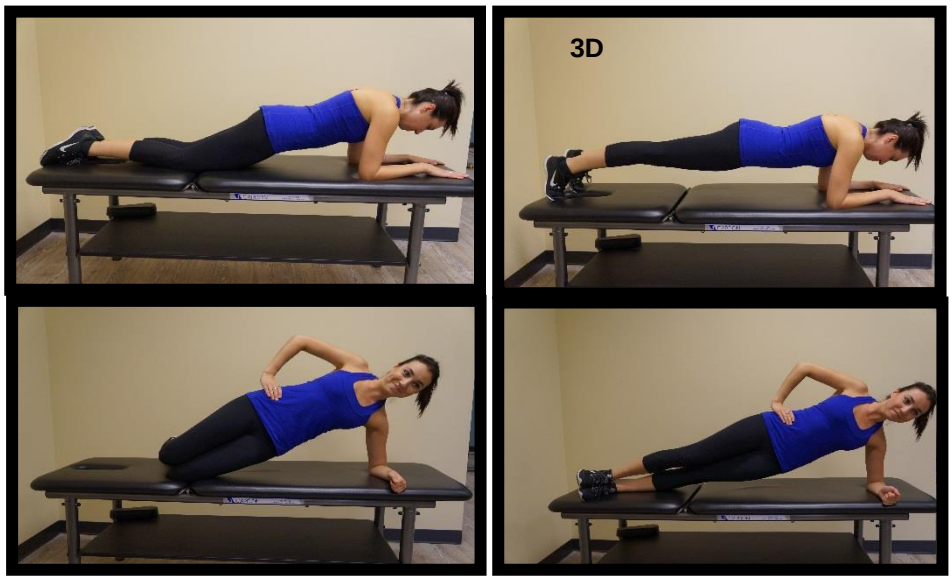
ACTIVE EXERCISE PROGRAM (3-5x/week)

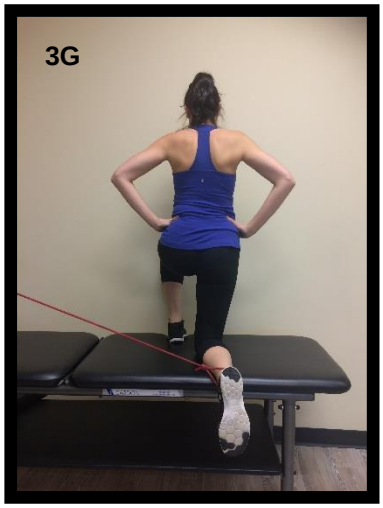
- ✓ Cardiovascular – treadmill 30-60 min
- ✓ Uni-pedal squat progress to clock squat (3A)
- ✓ Hip flexor progressions (3B)
- ✓ Resisted Rotations (3C)
- ✓ Plank Progressions (3D)
- ✓ Walking lunge (3E)
- ✓ Seated FABER stretch (3F)
- ✓ Kneeling Rotation with TheraBand (3G)
- ✓ Spider man stretch (3H)

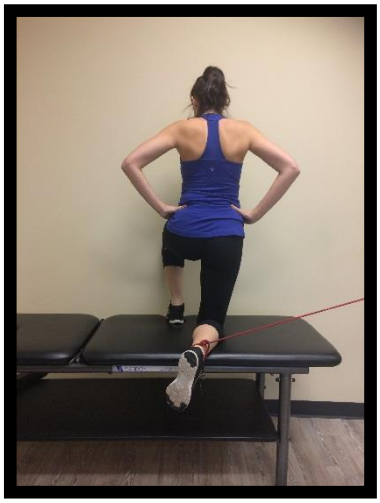


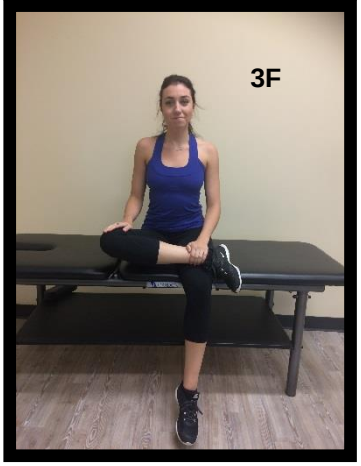












CRITERIA TO PROGRESS TO PHASE 4

- ☐ Hip flexion, abduction, and extension strength >30 lbs of force (pain free)
- ☐ Completion and independent with all phase 3 exercises and progressions with no pain
- ☐ Able to do normal activities of daily living without pain
- ☐ Able to perform single leg squat without knee valgus position

Phase 3 Exercise Descriptions

3A Unipedal Squat progress to clock squat – 10 reps 3 sets, 2x/day
Standing only on your surgical leg, lower down without allowing the hip to drop or knee collapse in. Make sure to flex at the hip without letting the knee pass in front of the toes. Keep majority of weight through your heels to force your glutes to work. Progress to changing position of opposite leg – in front, 45 degree angle, etc.

3B Hip flexor strengthening progressions – 10 reps 3 sets, 2x/day
Laying on your back, place ankles on a stability ball and wrap resistance band around both feet. Pull your surgical foot towards your chest (NO PINCH) return to starting position. Progress to do this in a bridge position, followed by removing the ball under the feet.

3C Resisted rotations 10 reps 3 sets, 2x/day
Standing with resistance band wrapped around your waist and weight in hands in front of you. Keeping pelvis stable rotate away from hip.

3D Plank progressions 30-1 min hold, 3 reps 2x/day
1 - Laying on your stomach, push up to stand on elbows and knees. Keep shoulders above elbows, spine in good alignment, core maintained, and do not allow the pelvis to dip. Progress to do this on elbows and feet.
2 – Laying on your side, push up on elbow and knees. Maintain alignment as above. Progress to do this on elbows and feet.

3E Walking lunge 10 reps, 3sets, 2x/day
Place surgical leg in front of you, keep shoulders above hips, maintain core contraction, lower yourself toward floor. Do not allow your knee to go beyond your toes. Return to starting position, take a large step with opposite leg and perform a lunge.

3F Seated FAbER Stretch 3 reps 30-45 sec hold, 2x/day
Sitting in good posture, place surgical foot on opposite knee (figure 4 position), maintaining a stable pelvis push gently down on surgical knee to feel a stretch.

3G Kneeling rotation with resistance band 10 reps 3 sets, 2x/day
Kneeling with resistance band attached to ankle and table leg (or something else that will be stable), Maintain good posture while you rotate the leg inwards. Repeat with rotating the leg outwards. Keep pelvis stable during all movements

3H Spiderman Stretch 3 Reps, 30-45 second hold 2x/day
Start in push-up position. Get into a straight leg lunge position by bringing surgical foot forward, placed outside of hand. Lift the hand to the ceiling and open the chest, stretching until the chest is parallel to the wall. Repeat with foot on opposite side of hand and rotate in opposite direction. No pinch! Repeat with surgical leg behind.

DR I. WONG HIP ARTHROSCOPY REHAB PROTOCOL

PHASE 4 (Ballistic Strength/Sport Retraining): *4-6 MONTHS*

Goals

- ✓ Regain multidirectional strength/control
- ✓ Regain hopping, jumping, and begin to regain running mechanics
- ✓ Improve cardiovascular endurance
- ✓ Optimize balance/proprioception

Restrictions

x **No return to sport until cleared by Dr Wong and rehab team (6-12 months post)**

4-6 Month Exercise Checklist

- ☐ Upright bike/Elliptical/Treadmill moderate resistance 30-60 minutes
- ☐ Phase 3 Exercises
- ☐ Rotation with lunge progressions
- ☐ 5 months – hopping progressions, plyometrics*
- ☐ Run walk program*

***If no knee valgus or significant anterior femoral head translation on landing**

DR I. WONG HIP ARTHROSCOPY REHAB PROTOCOL
PHASE 4 (Ballistic strength/Sport retraining): *4-6 months*

MANUAL THERAPY (as needed)

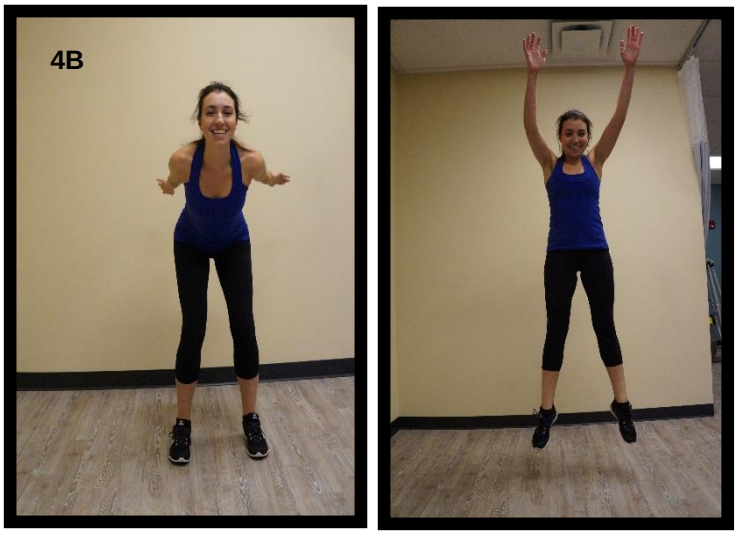
PROM AND PHYSIOTHERAPIST STRETCHING (as needed)

SOFT TISSUE TECHNIQUES (as needed)

ACTIVE EXERCISE PROGRAM (3-5x/week)

- ✓ Cardiovascular – treadmill 30-60 min
- ✓ Continue phase 3 exercises
- ✓ Rotation Progressions (resisted with lunge – resisted lunge with chop) (4A)
- ✓ At 5 months - hopping progressions, plyometrics, etc.* (4B)
- ✓ Begin run-walk program*

*If no knee valgus or significant anterior femoral head translation on landing



Phase 4 Exercise Descriptions

4A Rotation Lunge Progressions

1 – Holding a weight in front of you, place surgical leg in front of you, keep shoulders above hips, maintain core contraction, lower yourself toward floor. Rotate weight away towards surgical leg. Do not allow your knee to go beyond your toes. Return to starting position, take a large step with opposite leg and repeat by rotating in opposite direction.

2 - Perform exercise as above, instead of rotating perform a chopping action with the weight

3 – Continue with exercise above with back foot on a step/stair

4B Hopping Progressions, Plyometrics

1 – Double leg hop – maintain good pelvic posture, do not allow the knee to go in valgus position upon landing.

2 – Single leg hop – when appropriate progress from double leg to single leg hop

3 – Agility style drills – progress from above hopping to add in a lateral component (ie: ladder drill). Progress to dot drill, etc.

Run Walk Suggested Program (6 months – progressed through agility with no concerns, cleared by Dr Wong)

3x/week:
5 minute warm up walking
1 minute JOG
2 minute WALK
Repeat 7x

When able to complete above but no less than 1 week:
5 minute warm up walking
2 minute JOG
2 minute WALK
Repeat 7x

When able to complete above but no less than 1 week:
5 Minute warm up walking
3 minute JOG
1 minute WALK
Repeat 7 times

When able to complete above but no less than 1 week:
5 Minute warm up walking
4 minute JOG
1 minute WALK
Repeat 6 times

When able to complete above but no less than 1 week:
5 Minute warm up walking
3 minute JOG
30 second WALK
Repeat 6 times
**Continue to increase your jog time (max by 2 minutes) and decease your walk time. Do not progress time more than 1x/week.

CRITERIA TO PROGRESS TO PHASE 5

- ☐ Hip strength >40 lbs of force (pain free)
- ☐ Completion and independent with all Phase 4 exercises and progressions with no pain
- ☐ Able to do normal activities of daily living without pain
- ☐ Able to perform 2-legged hop without compensatory movements (e.g. pelvic drop, knee valgus, excessive anterior weight shift, etc.)
- ☐ Follow up with Dr Wong completed at 6 months and outcome measure completed

Date: _____

Outcome measure score: _____

POST OP REASSESSMENT FORMS

To be completed by Dr Wong's Rehab Team

2 weeks, 6 weeks, 12 weeks, 6 months, 1 year, 2 years