



Hip Preservation Pre-Operative Packet

Dr. Michael B. Ellman, M.D.





Dear Patient,

Thank you for choosing Dr. Michael Ellman at Panorama Orthopedics to address your medical needs. We are honored to be able to help you throughout your journey. It is important to know that you'll have a great deal of support & guidance throughout this process. Your team of specialists includes Dr. Ellman, the Panorama Orthopedics staff, and your Physical Therapists. As an approved candidate for hip arthroscopy, Dr. Ellman has confidence in your potential for success. Together, we will set realistic goals to get you to your desirable level of function. It is the mission of this team to work together with you to help you reach your goals.

You are the most crucial member of the team and your active participation is invaluable to the ultimate success of your surgery. Without your commitment to reach your goals and you providing feedback along the way, other team members cannot operate as effectively in their roles. We all rely on you to provide input on what you feel is working, what may not be beneficial, and how you are best motivated.

From our experience, you can expect a challenging yet rewarding road ahead. While no two patients are the same, all experience highs and lows along the way. We encourage you to build friendships with fellow patients, but caution you in comparing yourself or your progress with other patients. You have a unique medical history, injury, surgical procedure, body type, and goals, and your road to recovery will differ from others. The ultimate goal for everyone is to return to their pre-injury level and to stay there, not just how quickly you get there. This requires a progressive return that allows for complete healing of the repaired tissues and a re-balancing of all muscles involved.

We look forward to working with you and encourage you to play an active role in the process.

Sincerely,

Michael B. Ellman, MD, and our Panorama Team
Sports Medicine | Hip Arthroscopy
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IMPORTANT CONTACT PHONE NUMBERS

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CPM questions: _____

Hip Brace questions: _____





Table of Contents

I. "The Basics"

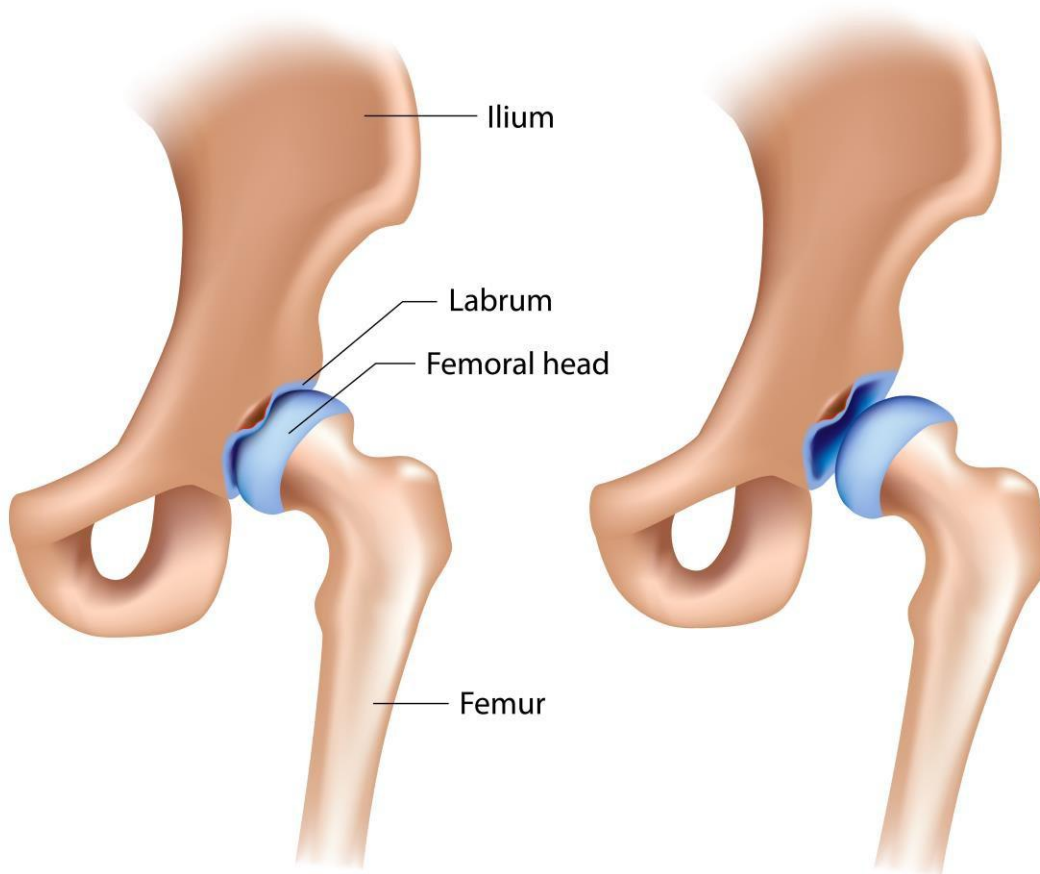
- Hip Anatomy
 - Labral Tear
 - CAM FAI
 - Pincer FAI
- Medical & Rehabilitation Descriptions
- Causes of Hip Pain
- Surgery Descriptions

II. General Instructions

- Preoperative Instructions
- Postoperative Instructions
 - Postoperative Medications
 - General Postoperative Care

III. Rehabilitation – Letter to Physical Therapists

Hip labral tear



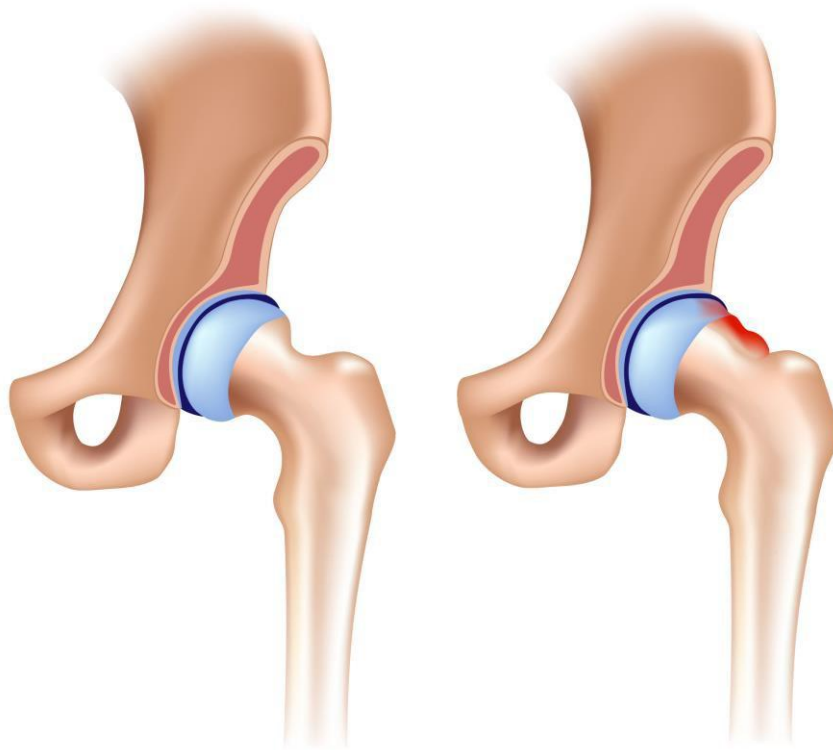
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- The labrum, because of its function in distributing weight-bearing forces, is susceptible to traumatic injury from shearing forces that occur with twisting, pivoting, and falling.
- Due to its nerve innervation, an isolated labral tear can result in pain.
- A majority of tears are located anterosuperiorly.
- Labral tears can cause micro-instability of the hip joint, leading to increased stresses between the femur and acetabulum.
- Instability can also lead to cartilage lesions and degeneration.

CAM Impingement

Normal

Cam



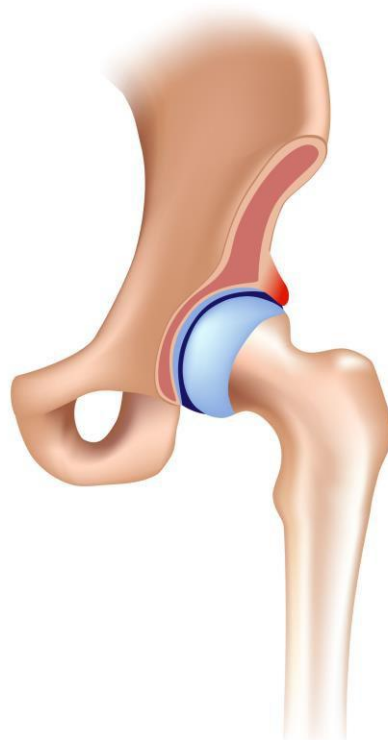
- Cam impingement occurs when the femoral head has an abnormally large radius, with a loss of the normal spherical junction between the femoral head and neck.
- “Cam” refers to the cam effect caused by a nonspherical or abnormal femoral head (ball) rotating inside a normal acetabulum (socket).
- This may occur as a sequelae of childhood disorders such as slipped capital femoral epiphysis (SCFE), but most commonly is attributed to eccentric closure of the femoral head growth plate during adolescence.
- This will lead to abnormal contact between the femoral head and acetabulum, especially with combined flexion, adduction and internal rotation, causing shear force on the anterolateral edge of the acetabular articular surface.
- With repetitive motion, this eventually results in articular delamination and failure of the acetabular articular cartilage.
- CAM impingement has been recognized as a cause of labral tears and cartilage lesions.
- Cam impingement has approximately a 3-to-1 predilection for males and problems often appear in young adulthood.

Pincer Impingement

Normal



Pincer



- A Pincer lesion refers to an abnormal acetabulum with increased overcoverage. Pincer impingement is caused by an abnormally deep or retroverted socket that bumps against a normal “ball” (femoral head/neck). This is opposed to CAM impingement, in which an abnormal “ball” (femoral head/neck) contacts a normal socket (acetabulum).
- The overcoverage can be general (coxa profunda) or local (acetabular retroversion).
- Pincer lesions cause persistent abutment of the femoral head into the acetabulum and can be a cause of posteriorinferior cartilage lesions.
- This can occur from overgrowth of the anterior edge, or retroversion of the acetabulum, which is a condition in which the face of the acetabulum tilts slightly backward instead of its normal forward position.
- With hip flexion, the prominent rim of the acetabulum impinges the labrum against the femoral neck.
- This repetitive microtrauma leads to breakdown and failure of the acetabular labrum.
- Pincer impingement occurs just about equally in males and females and more commonly starts to cause symptoms in middle age. ³

Medical and Rehabilitation Definitions

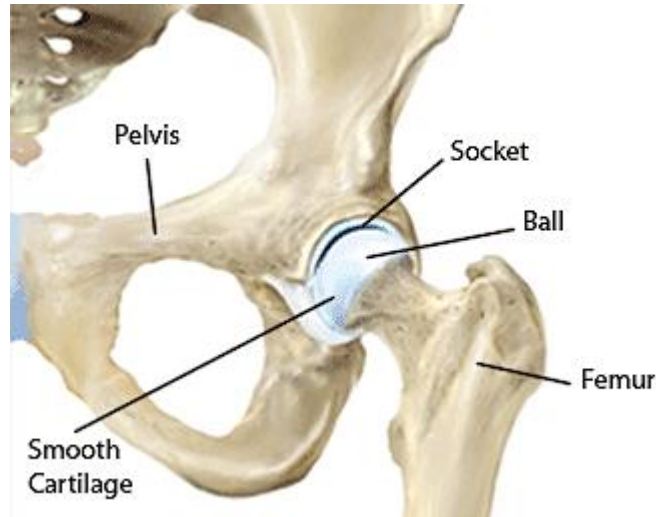


image from smithnephew.com

Acetabulum: hip socket

Anterior: towards the front of the body

AROM: “active range of motion” = movement is performed by patient

Closed Chain: movement in which the end segment of the exercised limb is fixed to the ground. Ex. standing exercises, leg press

Concentric: contraction of a muscle as it is shortening. Ex. “upward phase” of a biceps curl

Eccentric: contraction of a muscle as it is lengthening. Ex. “lowering phase” of a biceps curl

FAI: femoral acetabular impingement

Femur: thigh bone

Gait: walking pattern

Inflammation: the body’s natural response to protect from infection and surgical trauma. Can cause swelling, heat, and pain.

Isometric: contraction of a muscle without movement

Joint Mobs: Joint mobilization is a type of passive movement of a skeletal joint. It is usually aimed at a 'target' synovial joint with the aim of decreasing joint stiffness or decreasing pain.

Labrum: a fibrocartilaginous rim extending off the acetabulum to deepen the socket and provide a suctioning effect

Lateral: further away from the body’s midline

Medial: towards the body’s midline

Muscle Imbalances: differences in strength or tightness in muscles on either side of the joint

Muscle Inhibition: “shutting down” of a muscle usually due to pain or inflammation

Posterior: towards the back of the body

PROM: “passive range of motion” = patient does nothing, movement performed by someone else

Prone: lying on your stomach

ROM: range of motion

RPM: revolutions per minute

Supine: lying on your back

Transverse Abdominis (TA): deepest of major abdominal muscles, stabilize the spine and pelvis

Causes of Hip and Groin Pain

	Common Symptoms	Clinical Examination
Extra-Articular pathology (Muscle Strains, Tendinitis, Snapping Hip)	<ul style="list-style-type: none"> - Superficial groin, lateral hip, or posterior hip pain - Lateral or anterior snapping hip 	<ul style="list-style-type: none"> - Tenderness to palpation - Pain with stretching and/or resistance to involved structures
Intra-articular pathology (Osteoarthritis, Femoracetabular Impingement, Labral Tears)	<ul style="list-style-type: none"> - Groin pain - Clicking, giving way 	<ul style="list-style-type: none"> - Groin pain / limited ROM FABER test - Groin pain and/or clicking with the scour test - Groin pain with the SLR test
FAI	<ul style="list-style-type: none"> - Anterior pain with sitting 	<ul style="list-style-type: none"> - Anterior pinching pain with the impingement test
Degenerative changes / Arthritis	<ul style="list-style-type: none"> - Medial thigh pain - Morning stiffness 	<ul style="list-style-type: none"> - Painful and/or limited IR - Limited flexion ROM
Capsular laxity	<ul style="list-style-type: none"> - Instability 	<ul style="list-style-type: none"> - General hypermobility - Increased ER ROM with the leg roll test - Increased motion and/or apprehension with long-axis femoral distraction

*Note: The cause of hip is best determined by the LOCATION of pain.

- Anterior Hip Pain (ie. pain in the front of hip/groin): due to intra-articular (FAI, osteoarthritis, labral tear) vs. extra-articular (iliopsoas tendinitis, groin strain, hernia) pathology.
- Posterior Hip/Buttock Pain: most often referred from the spine or SI joints, and not the hip itself.
- Lateral Hip Pain: most often due to trochanteric bursitis or abductor (gluteus medius) tears.

Surgery Descriptions

Labral repair: The labrum is reattached to the acetabulum with suture anchors to hold it in place.

Debridement: Removal of small frayed edges of the torn labrum by an arthroscopic shaver tool.

Osteoplasty: An osteoplasty is performed at the head- neck junction of the femur. During this procedure a motorized burr is used to shave down the bony abnormality and re-creates a “normal” shape of the femoral neck.

Rim Trimming: A rim trimming procedure is used to address the bony abnormality of the acetabulum (socket) of the hip using a motorized burr.

Microfracture: A microfracture technique is performed to address cartilage lesions on the acetabulum or on the femoral head. A pic (awl) is used to create bleeding of the bony surface where the cartilage is damaged. This blood forms a clot which matures into new cartilage. The clot is delicate and requires minimal weight-bearing and good mobility for proper healing.

Chondroplasty: Minimal cartilage damage is repaired using a motorized burr tool to shave off any frayed edges.

Capsular Plication: A plication is done to tighten a loose capsule. During a capsular plication the capsular tissue is pulled together and closed with sutures to hold the tissues together and adding stability to the joint.

Thermal Capsulorrhaphy: During a thermal capsulorrhaphy, a high temperature probe is moved across the tissue in a striped pattern causing shrinkage of the tissue, thus stabilizing the joint.

Ligamentum teres debridement: In patients with partial tearing of the ligamentum teres, frayed tissue is removed similar to the labral debridement.

Synovectomy: A synovectomy is performed in patients who exhibit significant inflammation of the lining of the joint. During this procedure a heat probe is used to remove the irritated tissue.

Iliotibial Band Release: The Iliotibial band (ITB) is a thick band of tissue that runs from the hip to the knee along the outer side of the thigh. A release is done when the ITB is excessively tight, causing irritation (bursitis) to the outer aspect of the hip.

Labral Reconstruction: This procedure is performed when the labrum is small, of poor quality, or not repairable. A piece of fascia lata allograft or autograft is used to replace the damaged labrum. It is held in place with suture anchors along the acetabular rim.



PRE-OPERATIVE INSTRUCTIONS

DR. MICHAEL B. ELLMAN

Please follow these instructions carefully. If you have any questions, please contact a member of Dr. Ellman's team at (303) 233-1223, ext 6134.

Thank you for choosing Dr. Ellman and Panorama Orthopedics for your care. We look forward to helping you and assisting with your recovery from surgery. Our surgery schedule times are determined prior to surgery. Our scheduler will contact you within a couple days of your scheduled surgery to give you check in time information.

PRE-OPERATIVE HEALTH CLEARANCE

Pre-admissions testing is often required prior to surgery. You may need to get bloodwork (CBC, coags, electrolytes), a urine sample (UA), an EKG (if over age 40 or a history of heart problems), and a history and physical from your primary care physician as part of your preoperative medical clearance. If requested, this must be done within 3 weeks of your surgery date. Dr. Ellman's office will need the results prior to surgery. Please ask your physician to contact Dr. Ellman's office at (303) 233-1223 if there are any questions.

PRIOR TO SURGERY

Please discontinue medications such as anti-inflammatories, ibuprofen, and Aleve **one** week prior to surgery. Discontinue all blood-thinners (Aspirin, Plavix, Coumadin, etc) **one** week prior to surgery. Discontinue all over-the-counter herbal medications or dietary supplements **two** weeks prior to surgery. You may continue taking Celebrex, Tylenol, tramadol (Ultram), and pain killers (ie. Vicodin/Norco) up until the day before surgery. We have a list of medications to discontinue prior to surgery if there are any questions.

Please drink plenty of water the day prior to surgery. Alcohol is not recommended the day before surgery. If you have a cold, fever, or upper respiratory infection before your surgery, please call the office and inform Dr. Ellman's team.

Please do not eat or drink anything after midnight prior to surgery. Eating prior to surgery will cause complications with anesthesia and may result in your surgery being cancelled.

MORNING OF SURGERY

You may take your regular medications such as high blood pressure medicines, thyroid medicines, seizure medications, and any cardiovascular medications the morning of surgery with a small sip of water.

Please check into the Operating Room the morning of surgery with a list of your regular medications including doses. You will meet with anesthesiology prior to surgery.



WHAT TO BRING TO SURGERY

- Athletic Shoes
- Extra Shorts
- Pants with snaps on the side, yoga pants, or sweat pants
- Regular home medications
- An extra duffle bag to be used after surgery for equipment

AFTER SURGERY

Often we recommend an ice machine to help control swelling, help with pain control, and speed healing. The ice machine is not usually covered by insurance but we feel is helpful in healing following your procedure. It is your choice if you would like to purchase the ice machine. Our medical equipment team will call you to discuss the options.

Please schedule your post-operative appointments as soon as possible – Dr. Ellman’s schedule will book up rapidly.

Please schedule your post-operative appointments at approximately 2 weeks, 6 weeks, and 12 weeks after surgery. Please call the scheduling desk at 303-233-1223 to schedule your post-operative appointments.

PLEASE NOTE:

Certain procedures that Dr. Ellman performs are considered unlisted because CPT has not yet assigned a procedure code for the procedure. All of his procedures are medically approved. However, CPT has not yet established a code for the procedure using arthroscopy of the hip. Some insurance companies will not recognize these codes, and appeals will need to be made. As a courtesy, we will appeal; however, if your insurance carrier denies the procedure you may be responsible for the balance.

If an unlisted code will be used for your surgery, our insurance department will contact you to discuss your insurance benefits.

Dr. Ellman Surgical Post-Operative Instructions Prescription Medications

Indocin/Indomethacin:

- This medication helps to prevent excessive bone growth after surgery, which can occur with any surgery involving the hip joint.
- Take 75 mg tablet take once per day for 10 days in the evening, with food. This medication can cause stomach upset, so be sure to take it with food.
- If you are unable to tolerate this medication, please let the office know so we can put you on an alternative medication. Do NOT take ibuprofen, motrin, advil, aleve, or naproxen while taking this medication.
- Once you have completed the 10 day course of this medication, you can take ibuprofen or aleve as needed.

Aspirin:

- This medication is given to help prevent blood clots after surgery. This may also cause stomach upset so try to take this with food as well.
- Please take 325mg daily.
- You will take this medication for a total of 30 days after surgery.

Hydrocodone/APAP (Norco):

- This medication is for pain.
- This medication is to be taken AS NEEDED.
- Plan to stay on a scheduled dose of 1-2 tablets every 4-6 hours for the first 2-3 days after surgery.
- After 2-3 days you should be able to space out or discontinue the medication.
- Do not drive, drink alcohol, or take Tylenol/Acetaminophen while taking this medication.

Zofran (Ondansetron):

- This is an anti-nausea medication.
- You may take 1 of these pills (4 mg tablets) as needed every 4-6 hours after surgery.

Colace:

- Take 1-2 pills throughout the day to prevent constipation, which is common after surgery and while you are taking narcotics for pain control.
- It is normal to take several days to have a bowel movement after surgery.
- Drink plenty of clear liquids as the anesthesia can cause dehydration and constipation

Flexeril:

- Take this medication to help prevent muscle spasm postoperatively.
- Take 1 tab (10 mg) every 8 hours as needed for muscle spasm; do not take more than 30 mg (3 tablets) in one day.

Protonix (Pantoprazole):

- Take this medication to help with stomach upset postoperatively.
- Take 1 tab (40 mg) daily.

Wound Care and Showering

- Leave the big surgical bandage on and do not shower for 48 HOURS.
- After 48 hours, remove bandages and gauze, but LEAVE STERI STRIPS (white tape, similar to white band-aids) in place during showers.
- It is normal to see bloody soaked fluid on the bandages.
- Apply waterproof band-aids to each incision prior to showering. If the wounds get wet while showering, this is OK; however, we prefer to keep the wounds dry during the first 5 days after surgery.
- In between showers, leave open to air.
- Do not apply lotions or ointments to the incisions.
- Your stitches will absorb over time and are buried under your skin.
- Do not soak in any pool/bath water until 4 weeks after surgery.
- Do not allow pets to sit on your lap or sleep in your bed for at least 6 weeks following surgery. Pets may harbor fleas or mites or other organisms that may cause a wound infection.

Physical Therapy

- Physical therapy should start ideally on the first day after surgery.
- If your surgery is on Friday it is okay to wait until early the following week.
- Choose a PT clinic close to your home so that you are compliant with your program, and schedule your first appointment for the day following surgery (be sure to call and schedule the surgery PRIOR to your surgery).
- Please bring your prescription for therapy and protocol, provided at your preoperative clinic visit or on the website at www.panoramaortho.com → Doctors → Dr. Ellman → FAI PT Protocol, to your first PT appointment.
- At your first physical therapy visit, your PT should instruct you on proper weight bearing and teach your family member how to perform passive, light circumduction of the hip.

Weight Bearing

- **You will be flat foot weightbearing (20 pounds) for a total of ___ weeks. Use crutches throughout this time period while walking.**
- If you received SPINAL anesthesia, do not attempt to bear weight or walk until the anesthesia has completely worn off. The nurses in the postoperative recovery unit will help you determine when it is safe to get out of bed.
- After the feeling has returned to your leg, you may put 20 lbs of weight on that side.
- Please walk with your foot flat and mimic normal gait.
- Once you are 2-3 weeks out from surgery, you may begin to progress your weight bearing slowly as directed by your therapist, unless you undergo a microfracture procedure as well (this will delay the time until you may begin full weight bearing, usually maintaining TTWB for a total of 7 weeks following surgery).
- Getting off the crutches takes each patient a different amount of time.
- Don't try to rush yourself to get off the crutches.

Brace

- You will be provided with a hip brace to be worn for the first couple weeks following surgery, or until you are off crutches (usually 3-4 weeks). Always use crutches while wearing the brace and walk with flat foot weightbearing (20 pounds).
- If you had a microfracture procedure performed, you will wear the brace for 21 days following surgery (instead of 17).
- Brace Settings:
 - 0 degrees extension – 90 degrees flexion
 - Neutral rotation
 - 10 degrees abduction
- The brace is worn only when ambulating (walking), and is worn on the outside of your clothing.
- The purpose of the brace is to prevent hyperflexion and abduction (bringing the leg too close to the chest or bringing the leg too far away from the body).
- You will be fitted for your brace either before your surgical day or on your surgical day.
- The first few days, concentrate on icing the hip and wear the brace when you are up and about.
- You do NOT need to wear the brace while you are sleeping, on the CPM machine, laying on your stomach, using the upright bike, or icing your hip.
- You can remove the brace for showering and using the bathroom.
- The lateral post on the brace should be positioned over the lateral aspect of the leg.

Ice

- If using the ice machine, it will cycle on and off on its own.
 - Use it as much as you can for the first 72 hours.
 - Try to use it 4-5 times per day after the first 72 hours for the first two weeks after surgery.
 - You do not need it after 2 weeks.
 - You will receive information about picking up the ice machine at your preoperative visit.
 - Do not wear the brace over the ice machine pad.
- If using simple ice packs, ice the hip as much as you can for the first 72 hours – 20 minutes on, 20 minutes off.
 - Use 4-5 times per day after the first 72 hours.
 - Place the ice over the brace onto the hip, but never directly onto the skin.
 - Use as needed for the first 2 weeks.

Continuous Passive Motion (CPM) Machine

- The use of CPM has been shown to promote early healing following surgery and decrease the risk of scar tissue or adhesions post-operatively.
- Start on the day of surgery if you have time and feel up to it, otherwise the day after.
- Use this for a total of between 4 and 6 hours per day for a total of 2 weeks.
- You can split up into increments if you get sore/tired. You will need assistance to get into the CPM for the first couple of days after surgery.

- Start with the settings at 20 degrees extension and 55 degrees of flexion
 - Increase by 7-8 degrees per day as tolerated
 - Example: Day 1, 20 of ext and 55 of flexion. Day 2: 12 degrees of extension and 73 degrees of flexion, etc.
 - Do not go past 0 – 90 degrees.
- Use for a total of 2 weeks.
- To help in the prevention of lower back pain try and maintain proper spine alignment while in the CPM, you may roll a towel or use a small pillow behind your lower back.

Biking

- Gentle, no resistance, upright, stationary biking can begin the day after surgery.
- Do NOT use a recumbent bike! NO Nustep!
- Use non-operative leg to push the operative leg around gently.
- 20 mins on upright bike = 1 hour on motion (CPM) machine.
- You do not have to go out and buy a bike; rather, just use the bike while at PT.

Ted Hose

- You will be given a pair of ted hose (stockings) to wear after surgery. These help in the prevention of blood clots postoperatively.
- Please wear these at all times for the first 2 weeks following your surgery.

General Activity Levels

- It is beneficial to change positions often after hip arthroscopy. Alternate sitting, reclining, and lying down approximately every 30 minutes. Feel free to move around your home as much as you can tolerate, as you do not want the hip to get stiff following surgery.
- Spend 2-3 hours per day on your stomach (you can take the brace off for this).
- You will be permitted to drive (automatic transmission) **4 days** after surgery as long as you are not taking any narcotics and you feel comfortable doing so.

Follow-Up

- You will need to follow up in clinic with Dr. Ellman 2 weeks following your surgery.
- Please call centralized scheduling at 303-233-1223 to make an appointment.
- Routine post-operative follow up appointments will be made 2 weeks, 6 weeks, and 3 months following surgery.

When should you contact the office

- You have a fever > 101.4 (a low grade temp is expected after surgery, but let us know if it gets this high!)
- You develop chills or sweats
- You have pus, pain or redness surrounding the incision sites
- You develop calf swelling, redness, pain or warmth after surgery
- You experience any chest pain or difficulty of breathing

Possible Post-Operative Complications / Risks of Surgery

- **Infection:** The risk of infection is decreased with a sterile operating environment and antibiotics. For three days to your surgery, be sure to keep the skin of your hip as clean as possible using soap and water. Following surgery, careful handling of the incision sites reduces the risk of infection.
- **DVT:** (deep vein thrombosis, blood clot) is decreased through instituting early motion (CPM), mechanical means (TED hose) and medications (Aspirin). Following the pre-operative and post-operative instructions will reduce the risk of blood clot formation.
- **Pain:** With any surgical procedure, there is a potential complication of pain. Medication, ice, rest, compression, elevation and therapy reduce post-operative pain.
- **Numbness:** With hip arthroscopy, there is a small chance of numbness in the genitalia region briefly postoperatively. Also, you may experience some numbness of the upper outer portion of the thigh on the operative leg after surgery. This is due to stretching of the lateral femoral cutaneous nerve, a sensory nerve that is close to the surgical area. This nerve may be stretched or bruised during the procedure. This is normal and the numbness will resolve over time.



Physical Therapy

Dear Therapist,

Thank you for continuing the rehabilitation with Dr. Ellman's patient following their hip arthroscopic surgery. The intent of this program is to provide *guidelines* for progression of rehabilitation. It provides the basic exercises and techniques you will need to guide the patient to return to normal function. At the 6-8 week follow-up and if appropriate for the patient, Dr. Ellman will determine whether the patient is ready to progress to an advanced functional training program for return to sport, a maintenance strength program, or to continue to work on "the basics" before progressing further.

- Utilize the rehab outline and exercise descriptions as a guide. This is a proven program in terms of exercises and treatment, but some patients may need to move slower.
- Utilize clinical decision making to adjust treatments if needed within given guidelines and precautions.
- Progression through each phase of rehabilitation is based on clinical criteria and time frames.
- Understand that the program should be tailored for the individual based on their ability to progress and respond to treatment. This concept should continually be emphasized to the patient. Advancing through the rehabilitation process involves an accurate assessment of joint function, strength, mobility and progressive overload based on the patient's response.
- Primary goals at approx. **6 weeks out (non-mcfx)** and **10 weeks out (McFx)** are a normalized gait and good glute recruitment. We expect ROM restrictions at this time, especially External Rotation, Internal Rotation and Extension. Do not push through pain to achieve more as these ranges will increase with a return to functional activity not with overly aggressive stretching.

If you have any questions during the rehabilitation process, please feel free to contact Dr. Ellman or his assistant Samantha Gutierrez at 303-233-1223, ext 6134.

Sincerely,

Michael B. Ellman, MD
Email: mellman@panoramaortho.com
Hip Arthroscopy & Sports Medicine
Panorama Orthopedics