



Hip Preservation Information Packet

Dr. Michael B. Ellman, M.D.





Dear Patient,

Thank you for choosing Dr. Michael B. 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. Despite the hip pain that you are currently experiencing, Dr. Ellman has confidence in your potential for success via either nonoperative or operative treatment. Together, we will set realistic goals to get you to your desirable level of function. It is the mission of our 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 treatment. 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, 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 enables your therapist to help re-balance all muscles involved, and possibly surgical intervention if needed to help you achieve all of your goals.

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

Sincerely,

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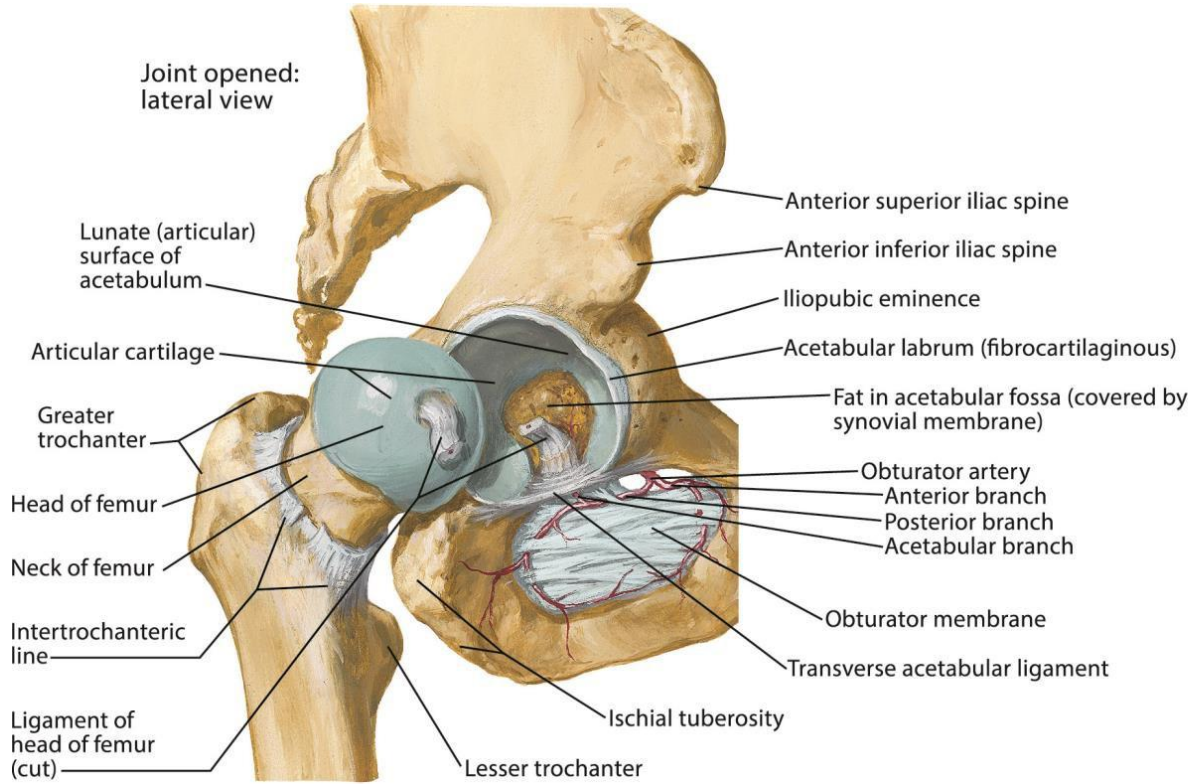


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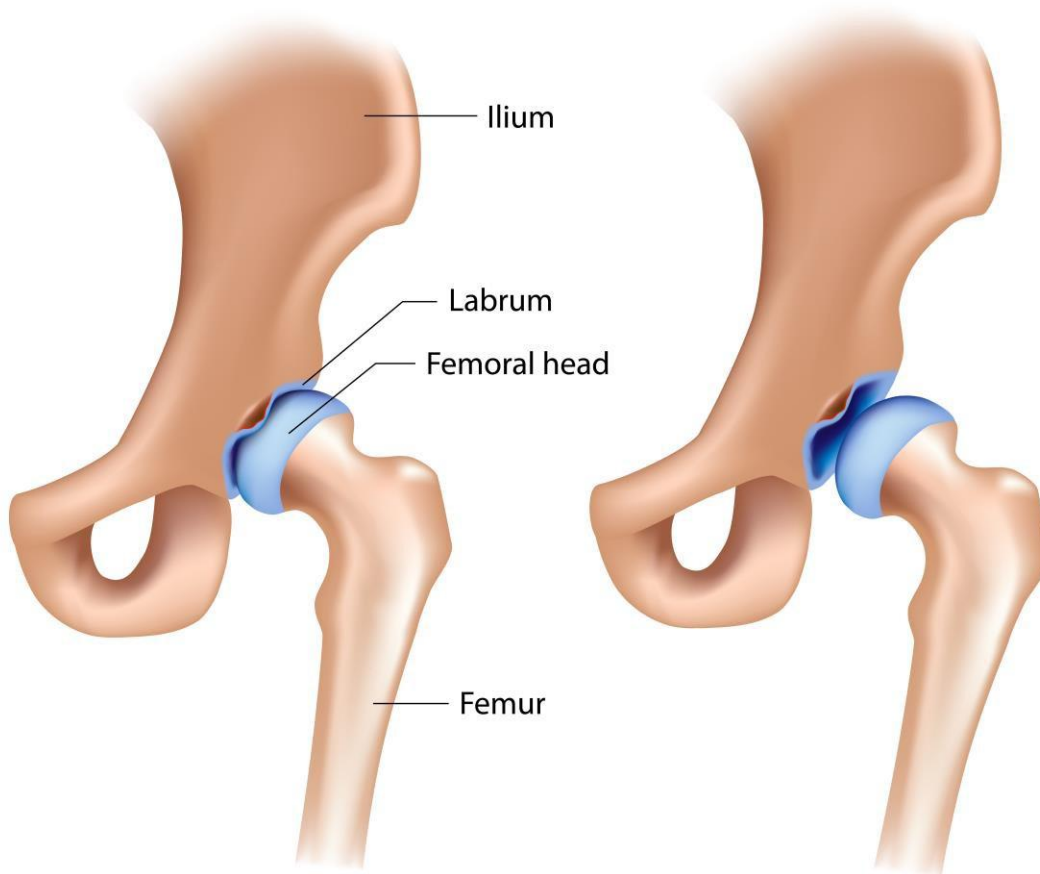
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Hip Anatomy



F. Netter
M.D.

Hip labral tear



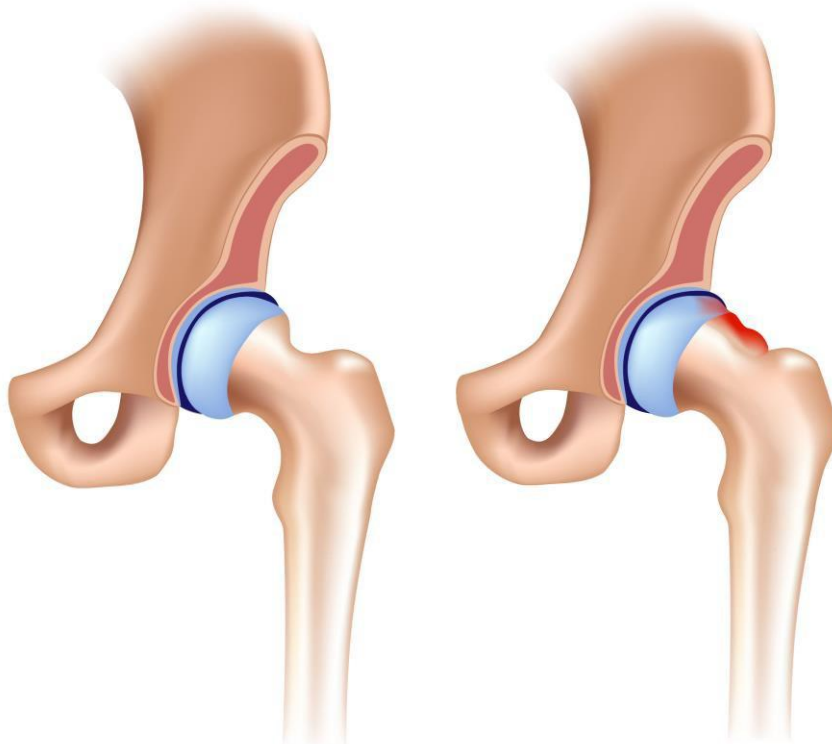
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- The labrum, because of its function in distributing weight-bearing forces, is susceptible to traumatic injury from shearing forces that occur with twisting, pivoting, and falling.
- Due to its nerve innervation, an isolated labral tear can result 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

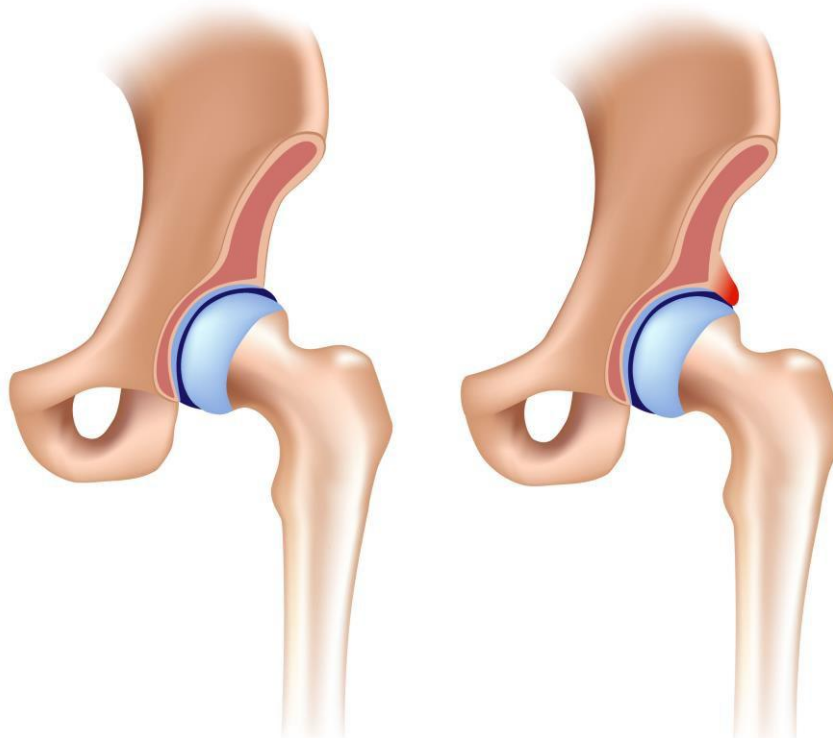


- Cam impingement occurs when the femoral head has an abnormally large radius, with a loss of the normal spherical junction between the femoral head and neck.
- “Cam” refers to the cam effect caused by a nonspherical or abnormal femoral head (ball) rotating inside a normal acetabulum (socket).³
- This 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.³
- 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

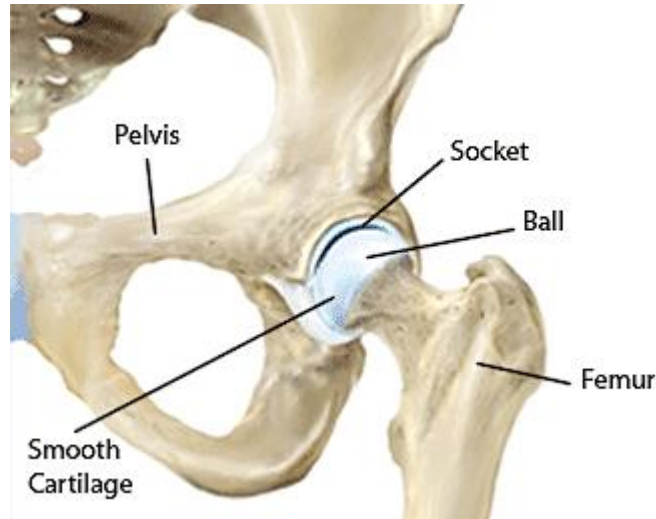


image from smithnephew.com

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; helps to stabilize 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.