Hip Arthroscopy - Labral Repair & Femoroplasty
Evidence-Based Rehabilitation Protocol

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Criteria-based progression following primary hip arthroscopy with labral repair and femoroplasty for femoroacetabular impingement. Additional procedures (microfracture/cartilage restoration, labral reconstruction, gluteus repair, revision surgery) require procedure-specific modifications.

Phase	Timing*	Goals / criteria	Rehabilitation focus / precautions
1. Protection / mobility	0-2 weeks	Protect labrum/capsule; minimize pain and swelling; hip flexion to 90° comfortably; maintain full knee/ankle motion; good gluteal and core activation; safe crutch gait.	**Weight bearing:** ~20 lb flat-foot / foot-flat partial WB with 2 crutches. **ROM:** flexion 0-90°; extension to neutral; avoid forced ER and combined extension + ER. Gentle circumduction/PROM, prone lying as tolerated, stationary bike with high seat/no resistance. Ice/cryotherapy, compression and activity modification for pain/effusion. **Avoid active SLR and repetitive active hip flexion** to limit iliopsoas irritation.
2. Progress weight bearing / gait	2-4 weeks	Pain-free flexion ≥90°; hip extension progressing toward ~10°; minimal irritability; progress toward normalized gait without Trendelenburg or limp.	Gradually increase WB and wean crutches only with normal mechanics and no increase in pain. Bike; quadruped rocking; gentle ROM; bridges; standing hip abduction; weight shifts; mini-squats; heel raises; trunk/core activation. Continue to avoid aggressive hip-flexor strengthening or stretching.
3. Restore ROM / foundational strength	4-8 weeks	Normal or near-normal symmetrical ROM; normalized gait without assistive device; minimal pain; no reactive joint symptoms; improving pelvic control.	Progress closed-chain strength: squats, bridges, step-ups, light leg press, resisted side steps, hip abductor/extensor strengthening and core stabilization. Begin controlled single-leg balance/strength. Walking program when terminal hip extension and gait are normalized. Progress hip-flexor loading gradually only if anterior hip remains quiet.
4. Early functional restoration	8-12 weeks	Full functional ROM; pain-free ADLs; good single-leg pelvic/lower-extremity control; increasing strength without post-exercise joint irritation.	Progress multi-planar single-leg strength and neuromuscular control: split squats, lunges, deadlift patterns, step-downs, single-leg squats, dynamic balance. Elliptical/bike; swimming with pull buoy. Avoid aggressive kicking if hip flexor symptoms persist.
5. Impact / running progression	12-18 weeks	Hip strength >80% of uninvolved side; HOS-Sport >85% when used; ~80% LSI on balance testing; pain-free single-leg squat/step-down with good pelvic control; no post-activity flare.	Begin straight-line walk/jog progression when criteria are met. Gradually increase intervals, then distance, then speed. Add low-level plyometrics and agility after running is tolerated. Continue progressive hip/core strength, rotational control and sport/work-specific conditioning.
6. Return to sport	18+ weeks; often 5-8+ months	Full pain-free ROM; no joint irritability; hip strength preferably ≥90% LSI with adequate absolute strength; excellent pelvic/lower-extremity control; functional testing ≥90% symmetry; psychological readiness; tolerance of sport-specific workload.	Advance sprinting, cutting, pivoting, multidirectional agility, advanced plyometrics and sport-specific drills. Progress noncontact -> controlled practice -> full practice -> competition. Return is criteria-based; higher-demand field/court athletes commonly require 5-8+ months.

*Timelines are guardrails. Progression should be based on tissue healing, symptoms, ROM, gait, strength, pelvic control and functional testing. Do not advance if pain or joint irritability meaningfully increases.

Key Early Precautions

• **Weight bearing:** 20-lb flat-foot partial weight bearing with two crutches for approximately 2 weeks; then gradually advance and wean crutches over weeks 2-4 as gait normalizes.

• **Hip flexion:** limit flexion to approximately 90° during the first 2 weeks; progress thereafter without forcing end range or provoking anterior hip pain.

• **Capsule:** avoid aggressive hip extension and external rotation early, particularly combined extension + external rotation, when capsular closure has been performed.

• **Iliopsoas protection:** avoid active straight-leg raises and repetitive/resisted hip flexion early. Do not progress hip-flexor strengthening through anterior hip pain or snapping.

• **Avoid prolonged sitting:** change position frequently during the early postoperative period and avoid sustained deep hip flexion.

• **Inflammation control:** use ice/cryotherapy, compression, relative rest and load modification. Rehabilitation should not create persistent groin pain or a next-day increase in joint irritability.

Procedure-Specific Modifications

• **Microfracture / cartilage restoration:** requires a more protected weight-bearing progression; follow the operative-specific protocol rather than this standard labral-repair pathway.

• **Labral reconstruction, revision arthroscopy, gluteus medius/minimus repair, or significant dysplasia/capsular laxity:** may require slower ROM, weight-bearing and strengthening progression.

• **Femoroplasty:** avoid premature high-load impact, pivoting and explosive activity while bony remodeling and soft-tissue recovery progress.

Objective Testing & Return-to-Running Criteria

• **ROM / symptoms:** full or near-full functional ROM, no meaningful joint irritability, and no increase in pain after normal walking or strengthening.

• **Gait:** normal gait without assistive device, Trendelenburg compensation or shortened stance phase.

• **Strength:** hip flexion, extension, abduction, adduction and rotation strength at least ~80% of the uninvolved limb before initiating running; handheld dynamometry is preferred over manual muscle testing when available.

• **Single-leg control:** pain-free single-leg squat and lateral step-down with good pelvic and femoral control.

• **Patient-reported function:** Hip Outcome Score - Sport Subscale (HOS-SSS) >85% is a useful criterion when routinely collected.

• **Balance:** approximately ≥80% limb symmetry on Star Excursion Balance Test/Y-Balance or comparable dynamic balance testing.

Suggested Return-to-Sport Criteria

• Full, pain-free hip ROM appropriate for sport.

• No groin pain, catching, reactive synovitis, or meaningful next-day symptom increase with high-level training.

• Hip abduction, adduction, extension, flexion and rotational strength preferably ≥90% LSI, with adequate absolute strength for the athlete's sport.

• Single-leg squat, step-down, landing and deceleration tasks performed with excellent pelvic and lower-extremity control.

• Hop / functional test battery ≥90% symmetry when appropriate for the sport; assess movement quality in addition to distance or time.

• Adequate power and rate of force development for competitive athletes, not simply side-to-side strength symmetry.

• Tolerance of sprinting, cutting, pivoting, jumping and sport-specific drills at progressively increasing intensity.

• Completion of noncontact -> controlled practice -> full practice progression without symptom recurrence.

• Psychological readiness and confidence with sport-specific movement.

Clinical Emphasis

Avoid hip-flexor overload

Iliopsoas irritation is a common postoperative problem. Early excessive active hip flexion, repetitive straight-leg raising, aggressive stair climbing and premature resisted flexion should be avoided if they reproduce anterior hip/groin symptoms.

Restore gait before adding volume

Do not trade crutches for a limp. Progress weight bearing and walking volume only when pelvic control, terminal hip extension and stance mechanics are appropriate.

Strength recovery takes time

Symptoms and daily function may improve earlier than objective hip strength. Continue progressive strengthening through later rehabilitation rather than stopping therapy once walking and basic ADLs are comfortable.

Running is criteria-based

Current expert consensus places initiation of straight-line running in the 12-18 week phase when single-leg control, strength and patient-reported function are adequate, rather than automatically clearing all patients at a fixed week.

References / Evidence Base

1. 2024 International Society for Hip Preservation (ISHA) physiotherapy agreement on post-operative rehabilitation following hip arthroscopy for femoroacetabular impingement syndrome. J Hip Preserv Surg. 2025.

2. Holling MJ, Miller ST, Geeslin AG. Rehabilitation and Return to Sport After Arthroscopic Treatment of Femoroacetabular Impingement. Arthrosc Sports Med Rehabil. 2022;4:e125-e132.

3. Wahoff M, Ryan M. Rehabilitation after labral repair and femoroacetabular decompression: criteria-based progression through the return to sport phase. Int J Sports Phys Ther. 2014;9:813-826.

4. Management of Labral Tears in the Hip: A Consensus Statement. 2025.

5. Mass General Brigham Sports Medicine. Rehabilitation Protocol for Hip Arthroscopy for Femoroacetabular Impingement.

Clinical note: This protocol is intended as a general surgeon/PT framework for uncomplicated primary hip arthroscopy with labral repair and femoroplasty. Operative findings, capsular management, cartilage procedures, revision surgery and individual patient factors may require modification. Surgical restrictions supersede this guideline.

Return-to-Running Criteria & Progression

Running should begin only after the patient has met objective clinical and functional criteria, typically no earlier than approximately 12 weeks after uncomplicated labral repair and femoroplasty.

Minimum Criteria Before Initiating Running

• **Symptoms:** no resting pain and no meaningful groin pain with normal walking, stairs, or strengthening; no catching; no reactive synovitis; and no next-day increase in joint irritability.

• **ROM:** full or near-full functional hip ROM without painful end-range restriction; sufficient hip extension for normal gait mechanics.

• **Gait:** normal, pain-free gait without Trendelenburg pattern, shortened stance phase, or compensatory trunk lean.

• **Strength:** hip flexion, extension, abduction, adduction, internal rotation, and external rotation at least **80% LSI** compared with the uninvolved side, preferably measured by handheld dynamometry; consider absolute strength in addition to symmetry.

• **Single-leg control:** pain-free single-leg squat and lateral step-down with good pelvic, femoral, and trunk control.

• **Balance:** approximately **80% or greater LSI** on Y-Balance / Star Excursion or comparable dynamic balance testing.

• **Impact preparation:** pain-free bilateral pogo hops and low-level landing drills with appropriate control and no symptom flare afterward.

• **Patient-reported function:** HOS-Sport Subscale approximately **85% or greater** when routinely collected.

Suggested Walk-Jog Progression

Stage	Session	Goal / progression rule
1	5-min brisk walk warm-up; then 1 min jog / 2 min walk x 8-10	Easy conversational pace. Flat, predictable surface or treadmill. Complete 2 sessions without pain or next-day flare.
2	2 min jog / 1 min walk x 8-10	Maintain relaxed mechanics and cadence. Advance only if symptoms remain at baseline during and the following day.
3	4 min jog / 1 min walk x 6	Build continuous running tolerance before adding speed, hills, or cutting.
4	8 min jog / 1 min walk x 3	Continue every-other-day running initially; avoid consecutive running days if the hip becomes irritable.
5	20-30 min continuous easy run	Once comfortably tolerated, increase total running volume by roughly 10-15% per week.
6	Progress speed, hills, tempo work, then acceleration/deceleration	Add higher-load running only after steady-state running is symptom-free and strength/control continue to improve.
7	Introduce multidirectional running, agility, cutting, and sport-specific drills	Typically later in rehabilitation; require excellent single-leg control, ≥90% strength symmetry for higher-demand athletes, and no post-activity flare.

Response-to-Load Rules

• **Advance** when the patient has no more than mild transient discomfort during the session, no limp, and symptoms return to baseline by the following morning.

• **Hold the current stage** if soreness is mild but persists into the next day without functional decline.

• **Regress one stage or stop running temporarily** for increasing groin pain, recurrent catching, limp, loss of ROM, or a clear next-day increase in joint irritability.

• Increase **distance/volume before speed**, and speed before hills, cutting, and reactive sport demands.

• Running progression should occur on **nonconsecutive days initially**, with continued hip/core strength training on alternate days.

Clinical note: These criteria apply to uncomplicated primary hip arthroscopy with labral repair and femoroplasty. Cartilage restoration/microfracture, revision surgery, labral reconstruction, gluteal repair, or surgeon-specific restrictions may delay impact and running progression.