University Hospitals
Rehabilitation Services

University Hospitals
Drusinsky Sports Medicine Institute

Hip Arthroscopy Rehabilitation Guidelines

Hip Arthroscopy is a minimally invasive surgical procedure used to diagnose and treat problems within the hip joint. During the procedure, a surgeon makes small incisions and uses a thin, flexible tube with a camera to view the inside of the hip joint. This allows for direct visualization of tissues such as labral tears, cartilage damage, bone impingement and loose bodies within the joint.

Femoroplasty is often performed during hip arthroscopy. During the procedure, excess bone is removed from the femoral neck or head to relieve impingement and improve joint function.

Labral repair is a surgical procedure to fix tears in the labrum. The labrum is a ring of cartilage that surrounds the socket of the hip joint and helps stabilize the joint, aids in suction and provides cushioning. When it becomes damaged or torn, it can lead to pain, instability and reduced range of motion.

Acute Post-Op Instructions

- Physical therapy begins day 1 post-op
- Continuous passive motion (CPM) 4-6 hours/day for 21 days (5-10° increase per day)
- Brace to be worn 24/7 (may remove when on CPM or doing PT)
- Utilize ice machine daily
- Suture removal 10-14 days post-op
- Shower day 3 post-op; cover incisions with waterproof bandages
- See below for weight-bearing restrictions pending procedure

Considerations following Hip Arthroscopy

- Hip flexor tendinopathy – avoid active hip flexion initially and caution stressing this range
- Facilitate gluteal activation – if available, utilize biofeedback early on for neuromuscular re-education
- Manage scarring around portals
- Caution for synovitis
- Range of motion (ROM) equal to or better than contralateral limb by 6 weeks
- Avoid prolonged positioning with sitting, standing and walking
- Avoid anterior pinching and deep aching in the hip joint
  1. Compensatory patterns are easily formed with gait and mobility – tensor fasciae latae (TFL), glutes and quadratus lumborum common. Slowly wean off crutches.
- Hands on approach to minimize adhesions and to maximize mobility
- Exercise list not exhaustive for each phase – Okay to be creative and use clinical experience
- Guidelines are time-based but ultimately clinical judgment should be utilized when progressing through each phase. Every patient presentation is unique: criterion-based progression is more critical than time-based progression

Hip Arthroscopy Rehabilitation Guidelines

Procedure: ☐ Labral Repair ☐ Labral Reconstruction ☐ Lysis of Adhesions ☐ Revision Surgery

Precautions: Labral Repair/Labral Reconstruction

Weight Bearing Status	• 50%* flat foot weight bearing (FFWB) during 1st two weeks; avoid toe-touch weight bearing (TTWB) – Caution weight bearing until nerve block wears off
Crutches/Brace	• Used immediately post-op; weaned based on hip extension ROM and heel to toe pattern – Goal to discontinue (D/C) by 14-21 days • ROM 0-90°. Worn 24/7 unless in CPM, showering, or performing home exercise program (HEP) – Goal to D/C 14 days post-op)
ROM	• Limit active external rotation (ER) <20° (21 days), active range of motion (AROM) flex 90° or as tolerated. • Caution: During passive range of motion (PROM) flexion > 90°, abduction (ABD) > 20° and Hip extension > 0° first 2-3 weeks. No aggressive PROM during Phase 1 • CPM 4-6 hours/day or 2 hours if also biking, increase 5-10°/day Other:

*Dr. Karns: see capsular plication below

Precautions: Lysis of Adhesions

Weight Bearing Status	• 50%-100% FFWB x 3 days, then transition to weight bearing as tolerated (WBAT)
Crutches/Brace	• Used immediately post-op; weaned based on hip extension, pain, and heel to toe pattern (Goal to D/C by 10-14 days) • No brace
ROM	• As tolerated. Focus on restoring normal range of motion as soon as possible

Hip Arthroscopy Rehabilitation Guidelines

Procedure: ☐ Labral Repair ☐ Labral Reconstruction ☐ Lysis of Adhesions ☐ Revision Surgery

Precautions: Revision Hip Arthroscopy

Weight Bearing Status	• 50% FFWB during 1st two- four weeks (avoid TTWB) - Caution WB until nerve block wears off
Crutches/Brace	• Used immediately post-op; weaned based on hip extension ROM and heel to toe pattern (Goal to D/C by 21-28 days) • ROM 0-90°. Brace always worn unless in CPM, showering, or performing HEP (Goal to D/C 14 days post-op)
ROM	See labral repair: Increased caution with end range mobility and aggressive ROM. • Expect increased pain and slower progress – emphasize education and activity modifications

Capsular Plication Precautions

Weight Bearing Status	• TTWB for 5-7 days, then heel-toe partial weight bearing for 4 weeks.
Crutch D/C Criteria	• 60 secs of single leg stance without compensation (hip drop, trunk lean) or pain • Able to perform 10 reps of side-lying hip ABD • Adequate hip extension and pain-free normalized gait pattern with assistive device • Crutches: 2–0 preferred to avoid abnormal mechanics. 2–1–0 as needed to slow patient progression
ROM	• 4 weeks: Keep hip slightly flexed at all times. TTWB to avoid extension in stance phase. May do motion in frontal plane. • 4-12 weeks: Goal is to ambulate comfortably in stance phase. Avoid extension stretching, unless hip feels tight in normal walking stance phase. • 12 weeks: May begin extension stretching

Phase I

Phase I (0-2 Weeks)

Goals

- Reduce inflammation, swelling and pain
- Scar management: Stitch removal and minimizing potential for adhesions
- Restore neuromuscular control of posterior chain and quadriceps
- Gradually improve pain-free PROM and AROM within precautions
- Restore normalized gait pattern with assistive device

Interventions

Range of Motion

- PROM as tolerated (see precautions)
- Bike up to 40 mins per day (2-4 sessions)
- CPM machine 4-6 hours per day.
  - 5-10°/day (21 days)
- Prone lying for passive hip extension

Therapeutic Exercise

- Isometrics*+: glutes, quads, hamstrings (HS), adductors, abdominals, and speed, agility, and quickness
- Supine Log rolling
- Bent knee fall out
- Supine bridging+
- Quadruped rocking and cat/camel
- Stretch: Sustained lying supine c pillow under hips and/or prone
- Prone HS curl+
- Gait training: Alter G, assistive device

Caution

- No prolonged positioning > 60 minutes
- Avoid active hip flexion/strengthening hip flexors
- Modify sitting posture to limit flexion

Manual Therapy

- Scar mobilization avoiding incisions (in clinic and at home)
- Soft Tissue Mobilization (STM)/Instrument-Assisted Soft Tissue Mobilization (IASTM)/deep tissue to hip flexor, quads, adductors, glutes and TFL every session
- PROM within precautions: flexion to 90°, ABD to 20°, ER to 20°, log rolling, circumduction (30 reps clockwise/counterclockwise

Modalities

- Blood flow restriction +
  - += exercise can be combined with blood flow restriction (BFR)
- Neuromuscular electrical stimulation (NMES)
  - *= exercise can be combined with NMES
- Electromyography (EMG) biofeedback
- Vasopneumatic and cryotherapies
- Compression garments
- CPM machine 0-3 weeks

Sleep Postures

- Supine with legs elevated and supported – ankles above knees and knees above heart
- Side-lying on contralateral side in brace with pillows keeping surgical limb in neutral position when appropriate

Criteria to Progress to Phase II

1. Minimal to no reactive pain and swelling with physical therapy and ADLs
2. PROM hip extension within 10° of contralateral limb
3. Good neuromuscular activation of posterior chain and quadriceps
4. Full, asymptomatic weight bearing on surgical limb
5. Able to wean off crutches once criteria met (see page 1)

Phase II

Phase II (2-6 Weeks)

Goals

- Achieve full symmetrical AROM/PROM
- Normalize gait pattern and discontinue assistive device
- Progressively improve strength of hip/core musculature
- Able to tolerate ADL/school/work function pain free

Interventions

Range of Motion

- PROM as tolerated (see precautions)
- Bike up to 40 mins per day (2-4 sessions)

Therapeutic Exercise

- Clamshells+
- Bridge +
- Double leg squat +
- Single leg stance (when WBAT)
- Hip hikes (when WBAT)
- Plank variations: prone, side progressions
- Hip ABD/extension isotonics+
- Birddogs
- Prone quad stretch, ½ kneeling hip flexor
- Prone external rotation/internal rotation (ER/IR), stool rotations

Caution

- No prolonged positioning > 60 minutes
- Avoid hip flexor strengthening until week 4
- Avoid joint irritation due to increased activity

Manual Therapy

- STM/IASTM/deep tissue to hip flexor, quads, adductors, glutes and TFL each session
- Joint mobilizations begin week 4:
  - Caudal glides, distraction, lateral distraction
  - Mobilization with movement (MWM) ER/IR, anterior-to-posterior (AP) and posterior-to-anterior (PA) mobilizations in neutral and figure 4

Modalities

- Blood flow restriction +
  - += exercise can be combined with BFR
- NMES *
  - *= exercise can be combined with BFR
- EMG biofeedback
- Vasopneumatic and cryotherapies
- CPM machine 0-3 weeks

Education

- Importance of rest, sleep and nutrition

Criteria to Progress to Phase III

1. Full and pain-free ROM to meet demands of patient's activities
2. Normalized gait pattern and pain-free ambulation for community distances
3. Symmetrical double leg squat to 90° knee flexion
4. Good neuromuscular control with 8-inch step up and down

Phase III

Phase III (6-12 Weeks)

Goals

- Correct compensatory movement patterns
- Restore single limb and multi-directional strength and stability to allow for impact progressions
- Progress hip flexor strengthening (begin at 4 weeks)
- or force frame strength > 80% Limb Symmetry Index (LSI)

Interventions

Range of Motion

- Bike
- Elliptical at 8+ weeks
- Walking up to 30 minutes

Therapeutic Exercise

- Dynamic stretching — quad, HS, piriformis
- Leg press (double leg, single leg, eccentric)
- Single leg closed-chain progressions
  - Gluteus medius hip abductor at wall
  - Adductor-specific exercises
- Dead lift, sumo squats and lunge variations
- Core strengthening — chops, single leg rows, airplanes
- Step up, down, lateral
- Hip flexor activation — iso, banded, eccentric
- Dynamic balance training
- Plyometric programs*

Manual Therapy

- STM/IASTM/deep tissue to hip flexor, quads, adductors, glutes and TFL
- Joint mobilizations continued:
  - Caudal glides, distraction, lateral distraction
  - MWM ER/IR, AP and PA mobilizations in neutral and prone figure 4

Modalities

- Continue to incorporate BFR and biofeedback as appropriate

Education

- Avoid joint irritation due to increased activity
- Continued emphasis on stretching and mobility as activity increases

Criteria to Progress to Phase 4 and begin return to running program:

1. Handheld dynamometry (HHD) strength – Hip adduction (ADD), ABD, flexion and extension > 80% compared to contralateral side
2. No compensatory movement pattern present
3. Able to walk 30 minutes brisk without symptoms
4. Able to complete plyometric progression prior to return to running program

Phase IV

Phase IV (12+ Weeks and Return to Sport)

Goals

- Improve power and endurance of lower extremity
- Maintain single limb strength and stability as impact progresses
- Focus on multi-planar stability
- Progress into return to sport activities

Interventions

Range of Motion

- Cardio: Bike intervals, Elliptical
- Plyometric Programs: See Appendix A
- Return to running program: See Appendix A

Therapeutic Exercise

- Dynamic stretching: quad, HS, hip flexors, piriformis
- Single leg press
- Deadlift, squat and lunge variations
- Single leg closed-chain exercises
- Lawn mowers
- Multi-planar hip stability work (airplanes, cable resistance, weight-bearing rotational exercise)
- Sport cord jumping
- Hopping progressions — double leg, single leg, medial and lateral
- Continued core and hip strengthening

Manual Therapy

- STM/IASTM/deep tissue to hip flexor, quads, adductors, glutes and TFL unless asymptomatic
- **Joint mobilizations** continued:
  - Caudal glides, distraction, lateral distraction
  - MWM ER/IR, AP and PA mobilizations in neutral and figure 4
  - Self-mobilizations with band

Modalities

- Continue to incorporate BFR as appropriate

Education

- Avoid joint irritation due to increased activity
- Gradual return to sport
  - Incorporate staged progression back to sport with built in rest days

Criteria to Return to Sport:
****See Appendix B**

1. Clearance from MD
2. Pass hip sport cord test > 17/20
3. Hip Outcome Score (HOS) > 90 %
4. HHD LSI all directions > 90% symmetrical
5. Hop testing >90% limb symmetry
6. Passed single leg bridge test > 90% symmetrical
7. Hip adduction to abduction (ADD:ABD) ratio > 1.0 and > 1.5 for elite athletes

University Hospitals Rehabilitation Services

University Hospitals Drusinsky Sports Medicine Institute

Phased Return to Running Progression: Hip Arthroscopy

Appendix A

Name:

*Patient has met specific criteria in protocol to begin program

Dynamic Warm Up

1. Lateral band walks x 10 reps each
2. Single leg bridges x 5-10 reps
3. Single leg squats x 5-10 reps
4. Side plank with Hip Abd x 30" each
5. Plank x 30 seconds

Phase I: Walking

- Patient able to walk 30 minutes at 3.5 mph without pain

Phase II: Plyometrics

- Ladders: Forward, lateral, single leg, in/out, zig-zag, rest 2 minutes, repeat 3x
- Double leg line jumps: Front and Back 3 x 12 reps
- Double leg line jumps: Medial and Lateral 3 x 12 reps
- Alternating step and hold forward: 3 x 10 each limb
- Alternating single leg hops with bounce: 3 x 10 each limb

*Goal: To work your way up to 500-600 foot contacts with completion of phase II before progressing to phase III

Phase III: Walk/Jog program

- Recommend starting on treadmill to control speed and distance
- Pace: Comfortable jog where you can hold a conversation without being out of breath
- Run every other day for first two weeks, at least two days of running on each level before progressing
- **Tips:** Avoid hills/inclines initially, no speed work, work on form

Run Interval (min)	Walk Interval (min)	Repetitions	Total run time (min)	Total time (min)
1	1	x 7	7	14
2	1	x 5	10	15
3	1	x 5	15	20
4	1	x 5	20	25
5	1	x 5	25	30

- After completion of the above intervals, follow below progression:
  1. Run until fatigue or form failure, walk 1-2 minutes, then repeat for a total of 30 minutes
  2. Initiate outdoor running
  3. Jog every other day with goal of reaching 30 consecutive minutes
- After completion of **Phase III**, increase weekly mileage by 10-30%

Acceptable: Continue to progress training	Unacceptable: Back off training
General muscle soreness	Pain that lasts longer than 24 hours after workout
Slight joint discomfort after workout or next day that resolves in 24 hours	Pain that is present at beginning of run and becomes worse as run continues, and changes gait
Slight stiffness at beginning of run, resolves within 10 minutes	Pain keeping patient awake at night

*This Clinical Guideline may need to be modified to meet the needs of a specific patient. The model should not replace clinical judgment.

Appendix B Hip Labral Repair Return to Sport (RTS) Testing

Name:_____ Date of Test:_____ Weeks Post-op:_____

MR#:_____ Procedure:_____

Satisfactory Clinical Examination

1. Appropriate time from injury/surgery for healing
2. Completed rehabilitation program—Understands HEP
3. Pain-free full ROM
4. Acceptable patient subjective scores
5. No kinesiophobia

HOS Sport Outcome Measure: _____

*≥ 90% for RTS

HOS ADL Questionnaire: _____

*≥ 90% for practice, ≥ 100% for RTS

Hip Sport Cord Test

Pass: ☐ YES ☐ NO

	Time	Score	Stopped test due to:
Single Knee Bends (3 min)			☐ Form ☐ Pain ☐ Endurance
Lateral Agility (100 sec)			☐ Form ☐ Pain ☐ Endurance
Diagonal Agility (100 sec)			☐ Form ☐ Pain ☐ Endurance
Forward Box Lunges (2 min)			☐ Form ☐ Pain ☐ Endurance

*Total score ≥ 17 out of 20, see full RTS handout for instructions on how to perform test
*Single leg knee bends and forward box lunges: 1 point for each 30 seconds
*Lateral and diagonal agility: 1 point for each 20 seconds

Single Leg Bridge Test

Pass: ☐ YES ☐ NO

Uninvolved Side
Involved Side

*Goal: ≥ 90% limb symmetry

Functional Hop Testing

Pass: ☐ YES ☐ NO

	Uninvolved Side				Involved Side				LSI
Single Limb Medial Hop (cm)	1	2	3	Avg	1	2	3	Avg	
Single Limb Lateral Hop (cm)	1	2	3	Avg	1	2	3	Avg	
Cross Over Triple Hop (cm)	1	2	3	Avg	1	2	3	Avg	

*≥ 90% for RTS

Strength Testing (Isometric/Isokinetic or HHD):

Considerations: LSI ≥90% to pass. ADD:ABD ratio > 1.0, Elite athletes >1.5

Able to complete sport specific drills in clinic with good motor control/movement patterns (full speed):

Assessment: _____

Clinician Name: _____

Date: _____

Clinician Contact Email: _____

Cleared for Return to Sport? ☐ YES ☐ NO

University Hospitals Rehabilitation Services

University Hospitals Drusinsky Sports Medicine Institute

Hip Arthroscopy Rehabilitation Guidelines

Authors: Mario Gastaldo DPT, OCS, Kayley Mitchell DPT, OCS, and Kayla DeGeorge, SPT
Reviewed February 2025: Ryan Tedrick, DPT, OCS, SCS, FAAOMPT
Physician Review February 2025: Michael Karns, MD

References:

1. Ankem HK, Yelton MJ, Lall AC, Bendersky AM, Rosinsky PJ, Maldonado DR, Shapira J, Meghpara MB, Domb BG. Structured physical therapy protocols following hip arthroscopy and their effect on patient-reported outcomes-a systematic review of the literature. J Hip Preserv Surg. 2020 Dec 18;7(3):357-377. doi: 10.1093/jhps/hnaa042. PMID: 33948193; PMCID: PMC8081410.

2. Fairheller, M.L., Jenkins, P.G., MacMillan, L., & Carsen, S. (2024). Rehabilitation and return to play after hip arthroscopy in young athletes. Journal of the Pediatric Orthopaedic Society of North America, 7.

3. Freckleton G, Cook J, Pizzari T. The predictive validity of a single leg bridge test for hamstring injuries in Australian Rules Football Players. Br J Sports Med. 2014 Apr;48(8):713-7. doi: 10.1136/bjsports-2013-092356. Epub 2013 Aug 5. PMID: 23918443

4. Hemstock, R., Mulhall, D., Didyk, J., Ogborn, D., & Lemmex, D. (2023). Postoperative weight-bearing restrictions and rehabilitation protocols after hip arthroscopy for femoroacetabular impingement: a systemic review. Journal of Hip Preservation Surgery, 10 (3-4), 220-227.

5. Heerey J, Risberg MA, Magnus J, et al. Impairment-based rehabilitation following hip arthroscopy: postoperative protocol for the Hip Arthroscopy international randomized controlled trial. J Orthop Sports Phys Ther. 2018;48(4):336-342

6. Holling MJ, Miller ST, Geeslin AG. Rehabilitation and Return to Sport After Arthroscopic Treatment of Femoroacetabular Impingement: A Review of the Recent Literature and Discussion of Advanced Rehabilitation Techniques for Athletes. Arthrosc Sports Med Rehabil. 2022 Jan 28;4(1):e125-e132. doi: 10.1016/j.asmr.2021.11.003. PMID: 35141544; PMCID: PMC8811526.

7. Hugenberg G, Stallons J, Smith C, Brockhoff K, Gingras M, Yardley D, Ayeni O, Almasri M. Clinical Commentary: A Criteria-Based Testing Protocol for Return to Sport Post Hip Arthroscopy for Impingement. Int J Sports Phys Ther. 2023 Oct 1;18(5):1218-1229. doi: 10.26603/001c.87629. PMID: 37795325; PMCID: PMC10547071.

8. Jones, D.M., Webster, K.E., Crossley, K.M., Ackerman, I.N., Hart, H. F. Singh, P.J., ... & Kemp, J.L. (2020). Psychometric properties of the Hip-Return to Sport after Injury scale (short form) for evaluating psychological readiness to return to sports after arthroscopic hip surgery. The American Journal of Sports Medicine, 48(2), 376-384.

9. Kraeutler, M.J., Anderson, J., Chahla, J., Mitchell, J.J., Thompson-Etzel, R., Mei-Dan, O., & Pascual-garrido, C. (2017). Return to running after arthroscopic hip surgery: literature review and proposal of a physical therapy protocol. Journal of hip preservation surgery, 4(2), 121-130.

10. Philippon, M.J., Ryan, M., Martin, M.B., & Huard, J. (2022).Capsulolabral adhesions after hip arthroscopy for the treatment of femoroacetabular impingement: strategies during rehabilitation and return to sport to reduce the risk of revision. Arthroscopy, Sports medicine and Rehabilitation, 4 (1), e255-e262.

11. Rath E, Sharfman ZT, Paret M, Amar E, Drexler M, Bonin N. Hip arthroscopy protocol: expert opinions on post-operative weight bearing and return to sports guidelines. J Hip Preserv Surg. 2017 Feb 23;4(1):60-66. doi: 10.1093/jhps/hnw045. PMID: 28630722; PMCID: PMC5467404.

12. Tyler TF, Fukunaga T, Gellert J. Rehabilitation of soft tissue injuries of the hip and pelvis. Int J Sports Phys Ther. 2014;9(6):785- 797.

13. Willimon, S.C., Briggs, K.K., Crossley, K.M., & Huard, J. (2014). Intra-articular adhesions following hip arthroscopy: as risk factor analysis. Knee Surgery, Surgery traumatology, Arthroscopy, 22,822-825.

14. Worner T, Nilsson J, Thorborg K, et al. Hip function 6 tot 10 months after arthroscopic surgery: A cross-sectional comparison of subjective and objective hip function, including performance-based measures, in patients versus controls. The Orthopaedic Journal of Sports Medicine. 2019; 7(6): 1-10