HIP ARTHROSCOPY

A Hockey-Specific Return to Hockey Progression

Evidence-Based Rehabilitation Timeline (Weeks 0-26+)

Prepared for clinical use	This document is intended for physicians, physical therapists, athletic trainers, strength and conditioning coaches, performance staff, players, parents, coaches, and rehabilitation professionals involved in return-to-hockey decision-making after hip arthroscopy for femoroacetabular impingement syndrome and labral pathology.

Important note	Every hip arthroscopy is unique. Progression should be individualized to surgical procedure, labral and capsular management, chondral status, symptom response, strength, skating tolerance, and medical team clearance. Do not progress solely based on time.

1. Clinical Purpose and Guiding Decision Rule

Time is a reference point - not clearance

Clinical purpose. Provide a structured, hockey-specific rehabilitation framework after hip arthroscopy for femoroacetabular impingement syndrome, labral pathology, and related intra-articular hip conditions, progressing from early protection through return to competition.

Primary decision rule. Progress the athlete when tissue response, clinical examination, hip strength, trunk and pelvic control, skating tolerance, and objective performance testing support advancement. Time-based milestones should be treated as reference points, not automatic clearance criteria.

2. Evidence Summary: What the Research Tells Us

Hockey data adapted to clinical decisions

Current literature supports favorable return-to-sport rates after hip arthroscopy in hockey athletes, but return to skating is not the same as durable return to hockey. Long-term participation, position-specific demands, age, revision status, and objective readiness should guide clinical counseling and progression.

Key Finding	Clinical Meaning	Implication for Hockey Rehabilitation
Hockey RTS rates are favorable	Recent hockey-specific cohorts report return-to-sport rates around 79-87%, with many athletes returning at the same or higher level.	Counsel athletes that return is realistic, but the hip still needs to tolerate skating, contact, fatigue, repeated shifts, and next-day recovery.
Age and revision status matter	Athletes under 30 tend to return at higher rates; revision arthroscopy has lower return rates than primary surgery.	Older athletes, revision cases, and players with longer symptom duration may require slower progression and more conservative counseling.
Surgical durability depends on joint status	Modern techniques emphasizing labral repair, osteochondroplasty, and capsular closure are associated with better long-term survivorship in broader hip arthroscopy cohorts.	Respect capsular/labral precautions early, monitor chondral findings, and avoid treating every hip arthroscopy as the same procedure.
Objective criteria remain limited	The literature still lacks a universally validated RTS test battery; many studies rely heavily on time alone.	Use a multi-factor decision model: range of motion, strength, functional testing, psychological readiness, hockey exposure, and next-day response.

3. Quick Reference Timeline

Progression is criteria-based

Phase	Weeks	Primary Focus	Estimated Hip Demand	Primary Advancement Theme
1	0-2	Protection and early recovery	Low	Calm tissue response and protected mobility
2	2-6	Gait, mobility, and activation	Low to moderate	Normalize gait and avoid hip flexor irritation
3	6-10	Strength and single-leg control	Moderate	Hip, trunk, adductor, and glute capacity
4	10-14	Return-to-skate preparation	Moderate to high	Lateral capacity, slideboard, plyometrics
5	12-18	Return to skating	Hockey-specific	Controlled on-ice exposure and next-day response
6	18-22	Skills exposure and conditioning	High	Crossovers, turns, stops, starts, shooting
7	22-26	Return to practice and contact	High, reactive	Practice tolerance, traffic, contact, repeatability
8	26+	Return to competition	Game demand	Objective RTP criteria and medical clearance

4. Phase-by-Phase Rehabilitation Progression

Controlled hip loading before hockey chaos

PHASE 1 | WEEKS 0-2 | PROTECTION AND EARLY RECOVERY

Clinical Intent	- Protect the labral repair, capsular work, and bony correction while restoring calm movement and early muscle activation.
Primary Goals	- Control pain and inflammation - Maintain protected gait quality - Restore gentle hip motion within precautions - Avoid anterior hip and hip flexor overload
Weightbearing	- Follow surgeon-specific restrictions - Use crutches until gait quality, pain, and procedure-specific precautions allow progression
Range of Motion	- Passive and active-assisted mobility within restrictions - Avoid forceful end-range flexion, adduction, internal rotation, or extension/external rotation if restricted
Strength and Conditioning	- Glute sets, quad sets, transversus abdominis activation - Gentle adductor isometrics if tolerated - Upper body and trunk training that does not stress the hip

Avoid / Defer

- Straight-leg raises if anterior hip symptoms occur
- Aggressive stretching or deep hip flexion
- Excessive walking volume
- Pivoting, twisting, or pushing through pinching

Criteria to Progress

- Incisions healing appropriately
- Pain controlled and not escalating
- Able to perform early activation without symptom increase
- No meaningful increase in symptoms the next day

Early-Phase Checkpoint	Clinical Meaning
Hip flexor calmness	Anterior hip irritation is a common limiter. Early strength should not create gripping, pinching, or next-day hip flexor symptoms.
Capsular and labral protection	Respect procedure-specific restrictions, especially when capsular closure, plication, chondral work, or microfracture was performed.
Next-day response	Progress only when mobility, walking, and early activation remain quiet later that day and the following morning.

PHASE 2 | WEEKS 2-6 | GAIT, MOBILITY, AND FUNDAMENTAL CONTROL

Clinical Intent	- Normalize walking mechanics, restore pain-free functional range, and build foundational trunk, pelvic, and hip control.
Goals	- Normalize gait - Reduce hip flexor irritability - Restore comfortable hip mobility - Build early glute, trunk, and adductor control
Mobility	- Bike with low resistance if cleared - Quadruped rocking within comfortable range - Half-kneeling and tall-kneeling control as tolerated
Strength	- Bridges and hip thrust variations - Mini-squats and supported split-stance loading - Side-lying hip abduction or modified lateral hip work - Adductor isometrics and early trunk anti-rotation
Conditioning	- Stationary bike - Aquatic walking if incisions healed and cleared - Upper body conditioning and low-irritability aerobic work
Estimated Hip Demand	Low to moderate

Avoid / Defer

- High-volume walking that causes next-day symptoms
- Aggressive hip flexor strengthening
- Deep squats or loaded pinching positions
- Running, jumping, skating, or hard lateral work

Criteria to Progress

- Pain-free daily activities
- Gait normalized or clearly improving
- Squat and step-up tolerated without pinching
- No hip flexor flare after strengthening

PHASE 3 | WEEKS 6-10 | STRENGTH AND SINGLE-LEG CONTROL

Clinical Intent	- Build hip, trunk, adductor, gluteal, and lower-extremity strength while preparing the athlete for lateral and single-leg demands.
Goals	- Restore single-leg control - Improve adductor and hip flexor capacity - Develop trunk and pelvic control - Prepare for slideboard and plyometric progression
Strength	- Rear-foot elevated split squat progressions - Single-leg Romanian deadlift variations - Hip thrust and bridge progressions - Short-lever Copenhagen progression - Cable or band resisted adduction, abduction, and rotation
Movement	- Forward and lateral step-downs - Single-leg squat patterning - Controlled lateral shuffle mechanics - Skating position holds

Criteria to Progress

- Pain-free walking and stairs
- Step-down without pelvic drop or femoral collapse
- Hip strength approximately 70-80% limb symmetry
- No next-day response after progressive loading

PHASE 4 | WEEKS 10-14 | RETURN-TO-SKATE PREPARATION

Clinical Intent	- Bridge clinic and weight room progress into higher-rate, hockey-specific preparation before first controlled on-ice exposure.
Goals	- Build lateral capacity - Introduce low-level energy storage - Prepare for edge-like hip positions - Confirm the hip tolerates repeated off-ice exposures
Strength and Power	- Progressive lower-body strength - Lateral bounds at low to moderate intensity - Pogo and landing mechanics if tolerated - Medicine ball rotational power
Hockey Preparation	- Slideboard introduction and intervals - Skating stance holds and lateral push mechanics - Crossover patterning off ice - Acceleration and deceleration mechanics at controlled speed
Estimated Hip Demand	Moderate to high

Avoid / Defer

- Maximal sprinting or chaotic cutting
- High-volume slideboard if groin symptoms emerge
- Loaded positions that reproduce anterior hip pinching

Criteria to Progress

- Functional ROM without pinching
- Hip strength at least 80% limb symmetry in key planes
- Lateral movement and low-level plyometrics tolerated
- No symptom increase lasting into the next day

PHASE 5 | WEEKS 12-18 | RETURN TO SKATING

Clinical Intent	- Reintroduce on-ice loading through a graded exposure model that progresses from controlled skating to edges, transitions, puck skills, and light shooting.
Week 12-14 On-Ice	- Straight-line skating - Easy laps and C-cuts - Wide turns - Session duration: 15-25 minutes - RPE 2-4/10
Week 14-16 On-Ice	- Forward and backward skating - Gentle edge work - Controlled stops with low volume - Basic puck handling and passing
Week 16-18 On-Ice	- Crossovers both directions - Figure-8 patterns - Power turns at controlled speed - Light shooting if non-provocative
Estimated Hip Demand	Hockey-specific, controlled

Avoid / Defer	- Early maximal sprinting or repeated hard stops - High-volume aggressive crossovers - Contact, scrimmage, or reactive team drills - Skating through sharp groin pain or pinching
Criteria to Progress	- Two to three skating exposures tolerated without next-day flare - Stride quality remains symmetrical under light fatigue - Crossovers are non-provocative and controlled - No hip flexor, groin, or low-back compensation the next morning

PHASE 6 | WEEKS 18-22 | SKILLS EXPOSURE AND HOCKEY CONDITIONING

Clinical Intent	- Progress from skating exposure to hockey skill exposure while increasing speed, complexity, and repeatability.
Goals	- Restore acceleration and deceleration tolerance - Build crossover, edge, and tight-turn capacity - Progress shooting and puck handling under movement - Develop repeated shift conditioning
On-Ice Progression	- Tight turns and crossovers both directions - Stops and starts with progressive volume - Forward-to-backward transitions - Puck handling with direction change - Passing and shooting off both legs
Conditioning	- Short intervals with full recovery - Repeated shift simulation at controlled intensity - Slideboard intervals and bike conditioning off ice
Estimated Hip Demand	High, but still controlled

Avoid / Defer	- Full team practice before individual skills are repeatable - Uncontrolled small-area chaos too early - Contact before the hip tolerates speed and deceleration
Criteria to Progress	- RPE 6-8 sessions tolerated with no symptom accumulation - Stops, starts, and turns performed without compensation - Strength and hop/control testing trending toward 85-90% symmetry - No next-day groin, hip flexor, or anterior hip response

PHASE 7 | WEEKS 22-26 | RETURN TO PRACTICE AND CONTACT

Clinical Intent	- Restore team practice tolerance, reactive decision-making, traffic exposure, contact tolerance, and confidence through repeated hockey-specific exposures.
Practice Progression	- Individual skating - Non-contact team drills - Controlled small-area games - Full practice without contact - Graded contact and board contact integration
Continue	- Heavy lower-body strength - Adductor and hip flexor capacity work - Lateral power and deceleration training - Repeated shift conditioning - Recovery and next-day symptom monitoring
Performance Goal	- Restore practice tolerance - Restore contact confidence - Maintain skating quality under fatigue - Prepare for position-specific game demands

Criteria to Progress	- Full non-contact practice tolerated without next-day flare - Contact progression completed without apprehension or symptom response - Coach/medical staff observe no meaningful skating compensation - Athlete confidence improving in reactive situations

PHASE 8 | WEEKS 26+ | RETURN TO COMPETITION

Clinical Intent	- Return to games is based on tissue response, objective performance, position demands, competition level, contact tolerance, and medical team clearance.
Requirements	- Surgeon clearance - Rehabilitation clearance - Full skating progression completed - Full practice and contact progression completed - No meaningful next-day response after practice
Recommended Benchmarks	- Hip strength at least 90% limb symmetry in flexion, extension, abduction, adduction, internal rotation, and external rotation - Quadriceps and hamstring strength at least 90% limb symmetry - Hop, bound, and lateral power testing at least 90% symmetry - Functional ROM pain-free and within 5-10 degrees of uninvolved side when appropriate - PROMs and psychological readiness support return
Return to Games	- Typically month 6+ for uncomplicated primary cases - Decision based on strength, performance, position, competition level, contact tolerance, and repeated exposure response

5. Hip Arthroscopy Demand Progression

Lower demand to game demand

The following progression summarizes common rehabilitation and hockey tasks from lower to higher demand. Use this to conceptualize the gradual increase in hip range, speed, rotation, force absorption, contact, and fatigue. Values are qualitative and should be interpreted clinically rather than as absolute thresholds.

Task / Exposure	Relative Hip Demand
Stationary bike, protected gait, basic isometrics	Low
Mini-squat, bridge, step-up, controlled split stance	Low to moderate
Single-leg strength, Copenhagen progression, loaded hinge	Moderate
Slideboard, lateral shuffle, low-level plyometrics	Moderate to high
Controlled skating stride, wide turns, C-cuts	Hockey-specific, controlled
Crossovers, tight turns, stops and starts, shooting	High
Small-area play, contact, repeated shifts, game speed	Very high

6. Return-to-Hockey Testing Battery

Objective data plus repeated tolerance

A complete return-to-hockey decision should combine clinical examination, strength testing, functional testing, on-ice observation, and the athlete's response over repeated exposures.

Category	Clinical Target
Range of Motion	Hip flexion, extension, abduction, adduction, internal rotation, external rotation; pain-free and ideally within 5-10 degrees of the uninvolved side.
Strength	Handheld dynamometry when available: hip abduction, adduction, flexion, extension, internal rotation, external rotation, quadriceps, hamstrings; target at least 90% limb symmetry before unrestricted play.
Functional Control	Single-leg squat, forward and lateral step-downs, Y-balance/reach testing, single-leg bridge, Copenhagen progression, trunk/pelvic control under fatigue.
Power and Change of Direction	Forward, lateral, medial, and crossover hop/bound testing; deceleration mechanics; shuffle-to-sprint; crossover-to-sprint; reactive direction change.
Patient-Reported Outcomes	Consider iHOT-12, HOS-SSS, mHHS, Hip-RSI, pain VAS, and athlete confidence rating.
On-Ice Assessment	Forward and backward skating, crossovers both directions, stops and starts, tight turns, transitions, shooting, puck protection, contact, and repeated shift simulation.

7. Hockey-Specific Clinical Pearls

Practical rules for return to hockey

1. Return to skate is not return to play. Skating laps does not reproduce contact, fatigue, traffic, shooting, or repeated shift demands.
2. The next-day response matters. A hip that feels fine during a skate but flares the next morning has not fully earned progression.
3. Crossovers are a key checkpoint. They combine hip flexion, adduction, internal rotation, trunk rotation, edge loading, and speed.
4. Strength before chaos. Build hip, trunk, adductor, and glute capacity before uncontrolled team drills or contact.
5. Position matters. Forwards, defensemen, and goaltenders should not be cleared with the exact same final-stage demands.

8. Position-Specific Return-to-Hockey Considerations

Final demands should match the role

Position	Emphasize Before Clearance
Forwards	First-three-stride acceleration, crossovers under speed, tight turns, shooting off both legs, puck protection, corner battles, net drives, and repeated shift conditioning.
Defensemen	Backward skating, backward crossovers, forward-to-backward transitions, lateral blue-line movement, gap control, angling, shot setup, and contact while changing direction.
Goaltenders	Deep hip flexion, internal rotation tolerance, butterfly entry and recovery, RVH positions, lateral pushes, adductor capacity, and repeated save recovery. Goaltenders may require a slower progression than skaters.

9. Clinical Green / Yellow / Red Light Framework

The next-day response matters

Response	Clinical Action
Green Light	Progress when symptoms remain 0-2/10, movement quality is clean, skating does not deteriorate with fatigue, and there is no next-day increase in hip, groin, or low-back symptoms.
Yellow Light	Modify when symptoms reach 3-4/10, crossovers become asymmetrical, stride length shortens, groin or hip flexor tightness increases, or symptoms linger into the next morning. Reduce volume 25-50% and remove the most provocative drill.
Red Light	Stop or refer when sharp groin pain, catching, locking, giving way, worsening limp, night/resting pain, neurologic symptoms, fever, calf swelling, or repeated worsening occurs.

10. Final Return-to-Play Standard

The athlete is not ready simply because they are pain-free. The athlete is ready when they demonstrate adequate healing, full functional range of motion, symmetrical strength, hip and pelvic control, skating tolerance, contact tolerance when appropriate, repeated shift capacity, confidence in game-like situations, and no adverse next-day response.

11. Key References

Source literature used for clinical synthesis

#	Reference
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Clinical use reminder

This guideline is intended to support clinical reasoning, not replace surgical precautions or individualized medical decision-making. Modify progression for surgical procedure, athlete response, and medical team clearance.