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Hip Arthroscopy Rehabilitation Protocol

General Guidelines:

- Limited external rotation to 20 degrees (2 weeks)
- No hyperextension past neutral (4 weeks)
- Normalize gait pattern with crutches
- Weight-bearing: foot flat touch down (50% bodyweight) for 3 weeks if labral repair or labral reconstruction, 6 weeks if cartilage micro fracture
- Continuous Passive Motion Machine
  - 4 hours/day or 2 hours if on bike stationary bike for 2 bouts of 20-30 minutes if tolerated for 2 weeks

Rehabilitation Goals:

- Seen post-op Day 1
- Seen 2x/week for first month
- Seen 2x/week for second month
- Seen 2-3x/week for third month
- Seen 1-2x/week for fourth month

Precautions following Hip Arthroscopy/FAI: (Refixation/Osteochondroplasty)

- Weight-bearing: foot flat touch down (50% bodyweight) for 3 weeks if labral repair or labral reconstruction, 6 weeks if cartilage micro fracture
- Hip flexor tendonitis
- Trochanteric bursitis
- Synovitis
- Manage scarring around portal sites
- Increase range of motion focusing on flexion, careful of external rotation, and aggressive extension

Phase 1	Time Frame (weeks)	Guidelines	Precautions
	WEEKS 0-2:	**Manual Therapy/Range of Motion:** **Soft Tissue Massage:** • Light quad, hamstring, glut STM or retrograde **Passive ROM:** • Flexion as tolerated in supine • Circumduction in about 10° of hip flexion • Hip abduction in about 10° of hip flexion • Log roll: if painful in supine, perform over a foam roller • IR supine @ 90° and prone @ 0° • ER in 30-90° of hip flexion **Passive ROM to be done by caregiver:** • Circumduction in about 10° of hip flexion • Hip abduction in about 10° of hip flexion	**Precautions:** **Weight bearing:** • 50% flat foot touch down weight bearing x 3 weeks. Make sure that their foot is on the ground demonstrating a normalized walking pattern (NO HOLDING THE HIP UP INTO HIP FLEXION) **Brace/Boots:** • Dr. Mayer: De-rotational boots taped with feet parallel while sleeping x 2 weeks **CPM:**

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		• Log roll • IR supine @ 90° **<u>Exercise Progression:</u>** To begin POD 1: • Stationary bike with no resistance: 15 minutes up to 2x per day; as tolerated • Isometrics: (2x/day) Glute, TA, quadriceps, hamstring, abduction, and adduction; as tolerated • Prone lying "Tummy time" 2+ hours per day Can begin POD 8-14: • Add Hip IR/ER isometrics (2x/day) • Initiate basic core: pelvic tilting, TVA and breathing re-education • Quadruped rocking and cat/camel • Short ROM bridging • Standing TKE, standing hamstring curls, pilates ring adduction/abduction • Standing abduction/adduction (full WB on uninvolved side only) • Heel raises @ 50% weight bearing • Butterflies and reverse clams as tolerated **<u>Pool Programming:</u>** • Not until full would closure at 3-4 weeks post op	• 4 hours/day cumulatively OR stationary bike 30 min/day without resistance **Sleeping:** • No restrictions on sleeping position • Sleep supine or on operative side with de-rotational booties on and taped with feet parallel. Pillow between legs if sleeping on side. • No Sleeping in CPM **Other:** • No hyperextension • No hip external rotation in extension (supine and prone) • Avoid anterior aggravation/hip flexor irritation • Start bandage changes the first day post-op using the dressing change kit provided. Make sure covered with tegaderm if in shower.

<u>Criteria For Progression</u> (must be met before progression into Phase 2):

1. Passive hip flexion to 90 degrees without irritation/pain.
2. Pain-free prone lying > 10 minutes consecutively
3. Proper TA activation with biofeedback x 60s without tenting, doming or holding of breath
4. Single leg isometric glute activation x 10/side with only glute activated and no hamstring or low back compensation

	Time Frame (weeks)	**Guidelines:**	**Precautions:**

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Phase 2	**WEEKS 2-6:**	**Manual Therapy/Range of Motion:** **Manual Therapy:** • Anterior thigh STM or retrograde • Prone glute release as needed • Side lying ITB/lateral quad • Light incision mobility **Passive ROM to be done by therapist as needed:** • Flexion as tolerated in supine • Circumduction in about 10° of hip flexion • Hip abduction in about 10° of hip flexion • Log roll: if painful in supine, perform over a foam roller	**Precautions:** **Weight bearing:** • Weaning from crutches weeks 3-5 • Alter-g as appropriate for gait re-training **Brace/Boots:** • De-rotational boots are discharged at 2 weeks **CPM:** • Can be discharged at 2 weeks post op **Sleeping:**

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		• IR supine @ 90° and prone @ 0° • ER in 30-90° of hip flexion • Prone IR/ER arcs of motion **Passive ROM to be done by caregiver:** ***Patients may wean from caregiver-assisted ROM at weeks 5-6*** **<u>Exercise Progression:</u>** Weeks 2-4: • Prone Assisted Hip Extension (PAHE) – Do not lift off of foam roller • Double leg bridge progression • Quadruped hip extension • Tall kneeling glut thruster progressions • Standing hip abduction (no side lying until 6 weeks post op) with foot slightly internally rotated • Heel raises • Stationary biking – may add light resistance Weeks 4-6: • Prone over swiss ball hip extension • Single leg glut progression as appropriate • Proximal ➔ distal band progressions of standing hip abduction • Hip hike on step • Clamshell progressions • Stool IR/ER • Single leg balance progressions • Step up progressions: sagittal plane first • DL squat progressions • Hamstring curl: machine or ball • Supine samurai hip flexor progressions • Side plank on knees • Stretching: quads, piriformis as tolerated, hamstrings NO HIP FLEXOR < 6 WEEKS!! **<u>Blood Flow Restriction Training:</u>** • May begin on operative limb per BFR parameters when incisions are fully healed	• No restrictions on sleeping position • Sleep supine or on operative side with de-rotational booties on and taped with feet parallel. Pillow between legs if sleeping on side. **Restrictions:** • No hyperextension until week 3 • No hip external rotation in extension (supine and prone) until week 3 • Avoid anterior aggravation/hip flexor irritation • No rotational lumbar/SIJ mobilizations or hip mobilizations • Per SHC policy, no dry needling should be performed in a patient who has had surgery < 6 weeks ago. **<u>As appropriate, cleared to:</u>** • Stationary bike with light resistance • Light walk for exercise being mindful of distance, grade and surface type • Experienced swimmers can swim with LE buoy and no flip turns

<u>Criteria For Progression</u> (must be met before progression into Phase 3):

1. >75% of passive hip flexion, IR, abduction and extension relative to non-surgical side
2. Glute max prone hip extension x 10 reps/side with proper activation without compensatory patterns/muscle activation
3. Appropriate hip hinge pattern with mini squat
4. Normalized and pain-free walking pattern without AD
5. SL stance x 30 seconds/side

	Time Frame (weeks)	Guidelines:	Precautions:

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Phase 3	**WEEKS 6-12:**	**Manual Therapy:** • PROM as needed for full PROM • STM to all areas as appropriate including lumbar spine, hip adductors, hip flexors • Continue Incision mobility • Joint mobilizations as needed for patients lacking ROM and presenting with a capsular restriction inferior and posterior as well as prone mobilization for anterior hip mobility ONLY IF APPROPRIATE • Rotational lumbar and SIJ mobilizations may begin at weeks 6-8 **Exercise Progression:** • Supine FABER slides • Prone IR/ER arcs of motion • Heels elevated glute bridges • Glute thrusters: supine off box or tall kneeling with super band resistance • Sahrmann Progressions/Light dead bug progressions • Forearm planks: start front plank on knees at 6 weeks and progress to full plank once 60 seconds is easy on knees with proper core activation • Leg press double to single leg progressions as tolerated (keeping in mind depth to avoid anterior hip pinching) • TRX DL to split squat progressions • Step up progressions: working into lateral and crossover planes • Lunge/split squat progressions starting with ½ depth until tolerance is developed • Monster walks starting with lateral and backwards walking • DL RDL/hip hinge progressions as appropriate form is demonstrated • Progress dead bug range as tolerated, can add band as appropriate	**Weight bearing:** • Fully weight bearing without crutches **Precautions:** • Continue to avoid any anterior irritation/flare ups that could delay progression • Do not push through pain **As appropriate, cleared to:** • Outdoor biking: week 6 but no clips • Swimming without pool buoy • Elliptical: week 6 as long as the following criteria are met: - Meet all above criteria for initiation of phase 3 - Full pain-free hip extension - No hip flexor tendon issues/flare ups

Criteria for Progression (must be met prior to progression into Phase 4 which includes running):

1. Full PROM in all planes relative to non-surgical side except for FABER which should be >75% (< 3 cm difference) relative to non-surgical side
2. Pain-free MMT of hip abduction (no TFL compensation), hip extension (no lumbar paraspinal or hamstring compensation), external rotator, internal rotator and adductor (no hip flexor compensation) all 5/5 bilaterally
3. Able to maintain forearm plank and side plank on toes x 60s without tenting, doming or holding of breath
4. Independent and normalized stair negotiation up and down
5. SL squat to 45 degrees of knee flexion without dynamic valgus x 15/side

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	Time Frame (weeks):	Guidelines:	Precautions:
	WEEKS 12-20	**Manual Therapy:** • Continue as indicated based on patient presentation, ensure full pain-free ROM in all planes **Exercise Progression:** • Maintain Hip Stability Program, trunk, hip and lower extremity strength and flexibility program • Single leg front and side plank progressions • May begin return to run program **ONLY WHEN** all of the above criteria have been met • Ladder drills: sagittal ➔ frontal ➔ rotational planes • Introduce and progress plyometric program after pain-free return to running and ladder drills	**Cleared for in appropriate patient:** • Stair Climber @ 12 weeks • Swimming: Breast Stroke kick @ 12 weeks • Golf: Chipping and putting 12-16 weeks • Light hiking being mindful of grade, surface and duration • Hockey: Return to ice, no shooting 12-16 weeks
Goals to be met within 12-20 weeks: 1. FABER < 3 cm relative to non-surgical side 2. Normalized gait FWB x 30 min 3. Long lever hip flexor 5/5 MMT to decrease risk of tendinopathy with return to run 4. Pain-free incorporation of return to run progression per SHC protocol once all previous goals/criteria have been met 5. Drop box jump without valgus to demonstrate appropriate landing form			
	Time Frame (weeks):		
	WEEKS 20+	• Continue more sport specific/patient-goal specific with continued emphasis on CKC glute/core progressions • Field drills, multi-planar • Must pass hip return to sports test prior to clearance to play, (typically at 24+ weeks post-op)	**Cleared for in appropriate patient (at 20+ weeks as criteria are met):** • More strenuous hiking • Golf: driving, possibly executive/short courses • Soccer/lax: ball drills and stick work • Hockey: shooting
Goals to be met within 20-24+weeks: 1. Pain-free progression of return to run progression with ability to tolerate 15 minutes of running consecutively without pain/irritation 2. Pass hip RTS test 3. Unrestricted return to activity			