HIP ARTHROSCOPY LABRAL REPAIR | DEBRIDEMENT POST-OPERATIVE GUIDELINES

The following Hip Arthroscopy Labral Repair | Debridement Post-operative Guidelines were developed by HSS Rehabilitation. Progression is both criteria-based and patient specific. Phases and time frames are designed to give the clinician a general sense of progression but do not replace clinical judgement. The rehabilitation program following hip arthroscopy must be tailored to the exact surgical procedure performed, taking into account tissue and bone healing properties.

The acetabular labrum is a band of tissue that inserts along the rim of the acetabulum which increases its surface area and helps protect the joint by maintaining a suction seal. Arthroscopic hip labral repair is performed when a patient sustains an injury to the acetabular labrum. The patient might have bony work done at the same time in order restore proper joint arthrokinematics.

These guidelines were developed to balance healing, gentle restoration of hip range of motion (ROM), and muscular balance and stability in the core, pelvic floor and hip. Special attention is given to prevent psoas muscle irritation through patient education of activities of daily living (ADL) and during physical therapy exercises. The underlying etiology of hip pathology is closely examined during the rehabilitation process to ensure mechanics throughout the kinematic chain are not contributing factors to the pathological process. These guidelines are separated into five phases with the eventual goal of returning each patient to their desired activities. In phase 1 there is an emphasis on soft tissue healing and reducing soft tissue irritability. Phase two and three gradually restore ROM and strength of the hip and surrounding musculature. Phase four and five help the patient progress to their daily activities and advance sports specific movements.

FOLLOW SURGEON MODIFICATIONS AS PRESCRIBED.

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Post-Operative Phase 1: Days 1-7

PRECAUTIONS

- Avoid capsular irritation and operative site overload
- Avoid pivoting or rotating hip during ambulation
- Avoid symptom provocation during ambulation, ADLs, therapeutic exercise
- Avoid active hip flexion with long lever arm (e.g. straight leg raise)
- Avoid active or passive hip extension beyond neutral
- No open chain or isolated hip muscle activation unless isometric
- Protective weight bearing (WB) (20%) for 2-3 weeks, unless specified by surgeon
    - Bilateral hip arthroscopy: WB as tolerated
- Ambulation as tolerated following weight-bearing precautions

ASSESSMENT

- Lower Extremity Functional Scale (LEFS)
- Numeric Pain Rating Scale (NPRS)
- Screen for red flags
- Wound and sutures
- Passive range of motion (PROM)
- Pelvic/hip/lower extremity muscle activity (quadriceps, gluteals, core musculature)
- Neurological status (global and local to surgical site)
- Ability to transfer
- Sitting tolerance
- Dressing
- Brace (if applicable)
- Ambulation with use of assistive device
- Stair ambulation technique and tolerance
- Use of cryotherapy
- Precaution awareness

TREATMENT RECOMMENDATIONS

- Patient education: activity modification, bed mobility, positioning, transitional movements
- Gait training with appropriate assistive device on level surfaces and stairs
    - Instruct in a step to gait pattern with foot flat weight-bearing according to precautions
- Progress ROM as tolerated, e.g.:
    - Quadruped rocking into hip flexion
    - Active assisted range of motion flexion and internal rotation/external rotation (IR/ER)
- Soft tissue mobilization to gluteals, abductors, adductors, as tolerated
    - Avoid direct mobilization of the incision sites
- Core and hip stability exercises utilizing isometrics and co-contractions of muscle groups
- Short crank or regular bike with minimal or no resistance for 10 to 20 minutes without pain
    - If using regular stationary bike, raise seat to tolerated height
    - Patients who have had a psoas release or pelvic floor pain: while not contra-indicated, proceed with caution; stop if pain is present
- Home exercise program (HEP) to include: abdominal setting supine, quadriceps setting, gluteal/abductor/adductor isometrics as tolerated
    - If patient is placed in prone position, use pillow under hips to avoid excessive extension
- Cryotherapy

CRITERIA FOR ADVANCEMENT

- Compliance with self-care, home management, activity modification
- Normalized gait with appropriate assistive device
- No pain at rest and with ambulation
- Passive range of motion expectations - monitor for pain
    - Hip flexion 75°
    - Hip ER 0°
    - Hip IR 15°

EMPHASIZE

- Minimizing pain and inflammation
- Protection of the surgical site
- Patient compliance with activity modification
- 20% WB unless surgeon specified

MODIFICATIONS TO PHASE 1

- No active ER for 4 weeks if a patient has concomitant pelvic floor pathology
- Limit ER as per surgeon (0˚-30˚) if there has been a capsular fixation during surgery
- With bilateral hip arthroscopies, the 20% weight-bearing restriction may be difficult to adhere to. The patient may be weight-bearing as tolerated, as per surgeon’s orders.

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Post-Operative Phase 2: Weeks 2-6

PRECAUTIONS

- Avoid premature discharge of assistive device: continue to use assistive device until gait appears symmetrical, reciprocal and without signs of compensatory patterns
- Avoid symptom provocation during ADLs or therapeutic exercise
- Limit repeated active hip flexion, especially if symptomatic
- Avoid premature use of gym equipment for hip strengthening

ASSESSMENT

- LEFS
- NPRS
- PROM (hip flexion 90° by week 4)
- Work and ADL tolerance
- Neurological status (peripheral nerve irritation)
- Strength: if available, use handheld dynamometer to assess strength of hip abduction, adduction and extension
- Soft tissue mobility (e.g. tensor fascia lata, quadriceps, adductor muscle group, gluteals)
- Gait

TREATMENT RECOMMENDATIONS

- Soft tissue mobilization: adductors, gluteals and abductors
- Hip ROM with a stable pelvis: bent knee fall-out, quadruped rocking
- Strengthening:
    - Hip strengthening, e.g.:
        - Gluteal bridges, standing mini squats, quadruped exercises
        - Clamshell exercise, if symptom-free
        - Sidelying hip abduction, prone hip extension (pillow under hips) as tolerated
    - Leg Press after 3 weeks
- Step down from tolerated height
- Core and trunk strengthening
    - Supine marching (upper extremities only)
    - Pallof press
    - Modified forearm plank (from knees)
    - Modified side plank

- Functional strength to include:
    - Stationary bicycle 10-20 minutes daily
    - Squats with emphasis on hip driven motion and erect spine
- Proprioception and balance exercises: progress from double limb support to single limb
- Cryotherapy with compression

CRITERIA FOR ADVANCEMENT

- Bilateral squat with lumbopelvic stability and symmetry
- Pelvic control during single limb stance
- Symptom-free ADLs
- Symptom-free and symmetrical ambulation without an assistive device
- ROM expectations: monitor for pain or symptoms
    - Hip flexion greater than 90˚
    - Hip ER 30˚
    - Hip IR 20˚
- Program may be advanced prior to 6 weeks if instructed by surgeon

EMPHASIZE

- Minimize pain and inflammation
- Patient compliance with activity modification
- Minimize faulty movement patterns and asymmetrical weight-bearing
- Continued protection of hip flexor

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Post-Operative Phase 3: Weeks 7-12

PRECAUTIONS

- Avoid symptom provocation
- Avoid overuse of soft tissue mobilization and aggressive PROM and stretching
- Utilize manual therapy as a supplement to strengthening
- Gym progression with physical therapist oversight

ASSESSMENT

- LEFS
- NPRS
- ROM (active and passive)
- Work and ADL tolerance
- Soft tissue extensibility
- Strength: if available, use handheld dynamometer to assess strength of hip abduction, adduction, flexion and extension, compare to non-surgical limb
- Gait
- Balance
- Functional assessment
    - Squat mechanics
    - Forward step up/step down control
- Cardiovascular exercise tolerance

TREATMENT RECOMMENDATIONS

- Soft tissue mobilization: gluteals, adductors, TFL
- Progress symptom-free hip ROM at end range
- Strength
    - Squats with emphasis on symmetry and depth
    - Lunge progression
    - Leg press single limb progressions
    - Single leg bridges
    - Can begin hip flexor strengthening to tolerance:
        - Isometrics, use of resistance band, or with functional activities

- Core and trunk strengthening:
    - Pallof press
    - Dead bug and bird-dog exercises
    - Front and side planks
    - Kneeling trunk strength and rotational exercises
- Progress functional strength to include:
    - Step ups/step downs
        - Progress height slowly prior to adding weight or external stimulus
- Proprioception and balance exercises, e.g.:
    - Progress from double to single limb support with and without perturbations
    - Windmills, lawnmowers
    - Star Excursion
- Initiate light agility drills and plyometrics if an adequate strength base is present
- Cross training: bicycle and progress to elliptical trainer - observe for good trunk and pelvic control

CRITERIA FOR ADVANCEMENT

- Good dynamic bilateral and unilateral balance
- Strength: handheld dynamometry testing preferred: seek > 80% symmetry of surgical vs non-surgical LE
    - If performing manual muscle testing: 5/5 lower extremity strength
- Optimize hip PROM: Flexion 110°, IR 30°, ER 45°
- Pelvic control and symptom-free with single limb activities
- Trunk control: 60 second static front/side planks, bird dog series, 15-30 seconds hold unilateral gluteal bridge with trunk and pelvic control

EMPHASIZE

- Minimize symptoms and inflammation
- Patient compliance with activity modification
- Restore functional movement patterns: favor quality of movement over quantity

MODIFICATIONS TO PHASE 3

- If tolerated, bias exercise prescription towards heavier resistance and less repetitions to build strength and power, prepare for a ‘return-to-sport, work or activity’ phase

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Post-Operative Phase 4: Weeks 13-16

PRECAUTIONS

- Avoid symptom provocation

ASSESSMENT

- LEFS
- NPRS
- ROM (active and passive)
- Work and ADL tolerance
- Soft tissue extensibility
- Functional assessment
    - Squat mechanics: double and single leg
    - Forward step up/step down control
    - Jumping and hopping
    - Deceleration and directional changes
- Cardiovascular exercise tolerance

TREATMENT RECOMMENDATIONS

- Begin sport- and activity-specific exercise progression
- Advanced agility and plyometric training: double to single leg progressions
- Dynamic balance activities
- Advance training of trunk for strength and endurance
    - Dynamic planks front/side up to 30 seconds
- Initiate return-to-run progression:
    - Begin with anti-gravity treadmill or pool running if available
    - Be cautious of overloading the hip: monitor for symptoms during and after running
    - See criteria below for initiation of return-to-run program

CRITERIA FOR ADVANCEMENT

- Lumbopelvic and hip strength/stability while maintaining pelvic control
- Strength: handheld dynamometry testing preferred: seek > 90% symmetry of surgical vs non-surgical LE
- Adequate ROM for patient goals
- Independent HEP and gym exercise program

EMPHASIZE

- Self-monitoring of symptom provocation
- Optimize ROM and strength
- Functional strengthening

MODIFICATIONS TO PHASE 4

- **Return to sport and activity training should include progression from single to multiplanar movements, slower to faster movements, unloaded to loaded exercises. Initiation of running program can be started when the following is demonstrated:**
    - Ability to perform single leg squat repetitions with adequate control
    - 30-45 second single leg gluteal bridge with pelvic and trunk control
    - Pelvic and LE control during plyometric exercises

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Post-Operative Phase 5: Weeks 17+ Return to Sport (if applicable)

PRECAUTIONS

- Avoid symptoms with therapeutic exercise and functional activities
- Avoid too much too soon- monitor exercise and activity/exercise dosing
- Incorporate rest and recovery

ASSESSMENT

- LEFS
- Hip-Return to Sport After Injury Scale (Hip-RSI)
- NPRS
- Quantitative assessments for limb symmetry, e.g.:
    - Lower extremity (LE) strength- hand held dynamometry or isokinetic testing if available
    - Flexibility
    - Hop Test
    - Star Excursion Balance Test
    - T-Test of Agility
    - Y-balance test
- Functional assessment
    - Access for movement strategy, control, alignment, deceleration and cutting:
        - Squat: double and single leg
        - Single leg stance
        - Forward step up and down
        - Single leg gluteal bridge
        - Jumping and hopping: double and single leg
        - Deceleration and cutting

TREATMENT RECOMMENDATIONS

- Monitor running progression to ensure appropriate technique and control
- Advance proprioceptive balance training
- Advance LE strengthening (bilateral and single leg)
- Plyometric progressions, e.g. cutting/agility skills and external perturbation
- Sport and activity-specific agility training
- Increase endurance and activity tolerance

- Sport and activity-specific multidirectional trunk stabilization
- Collaborate with ATC, performance coach/strength and conditioning coach, skills coach and/or personal trainer to monitor load and volume with return to sport participation

CRITERIA FOR DISCHARGE

- Symptom-free sport and activity-specific movements
- Quantitative handheld dynamometry testing is ≥ 90% of contralateral LE
- Hip-RSI score more than or equal to 65
- Cardiovascular endurance meets the demand of sport
- Independent with gym or return to sport/activity program

EMPHASIZE

- Self-monitoring of exercise volume and load progression
- Sport and activity-specific speed and power drills, including agility and deceleration
- If applicable, collaboration with trainer, coach or performance specialist
- Incorporate rest and recovery

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