

HIP ARTHROSCOPY WITH CORE DECOMPRESSION POST-OPERATIVE GUIDELINES

The following hip arthroscopy with core decompression post-operative guidelines were developed by HSS Rehabilitation. **Progressions in this guideline are both criteria-based and can be modified for individual patient needs.** Phases and time frames are designed to give the clinician a general sense of progression. The rehabilitation program following core decompression emphasizes early, controlled motion to prevent hip stiffness and to avoid disuse atrophy of the musculature. The program should be a balance of managing prior deficits, tissue healing and appropriate interventions to maximize flexibility, strength, and pain-free performance of functional activities. This model should not replace clinical judgment.

FOLLOW PHYSICIAN'S MODIFICATIONS AS PRESCRIBED.

HIP ARTHROSCOPY WITH CORE DECOMPRESSION POST-OPERATIVE GUIDELINES

Post-Operative Phase 1: Days 1-7

PRECAUTIONS

- Weight bearing as tolerated with assistive device
- **No high impact activity for 12 weeks**

ASSESSMENT

- Lower Extremity Functional Scale (LEFS)
- Hip Disability and Osteoarthritis Outcome Score (HOOS Jr.)
- Numeric Pain Rating Scale (NPRS)
- Screen for red flags
- Wound and sutures
- Swelling
- Neurological status (global and local to surgical site)
- Functional status
- Hip range of motion (ROM)
- Strength

TREATMENT RECOMMENDATIONS

- Strengthening exercises including quadriceps and gluteal isometrics, ankle pumps, seated knee extension, seated hip flexion, standing hip abduction, standing knee flexion
- Transfer training in and out of bed and sit to stand from chair
- Gait training with assistive device
- Stair negotiation with assistive device
- Activities of daily living (ADL) training
- Cryotherapy
- Initiate and emphasize importance of home exercise program (HEP)

CRITERIA FOR ADVANCEMENT

- Transfers unassisted from supine to sit and sit to stand safely
- Ambulates safely with assistive device on level surfaces and stairs
- Independent with HEP

EMPHASIZE

- Control swelling
- Independent transfers, gait, and stair negotiation
- Pain-free basic exercises

HIP ARTHROSCOPY WITH CORE DECOMPRESSION POST-OPERATIVE GUIDELINES

Post-Operative Phase 2: Weeks 2-6

PRECAUTIONS

- Weight bearing as tolerated with assistive device
- **No high impact activity for 12 weeks**

ASSESSMENT

- LEFS
- HOOS Jr.
- NPRS
- Hip active ROM
- Lower extremity (LE) and core strength
- Single leg stance
- Lumbo-pelvic dissociation
- Functional squat / sit to stand
- 4"- 8" step up / down

TREATMENT RECOMMENDATIONS

- Restore ROM through active motion, functional movements and guided passive stretches
- Closed kinetic chain exercises for the core and LE
- Exercises that encourage lumbo-pelvic and femoropelvic dissociation (e.g., quadruped rocking)
- Body weighted squatting with focus on hip hinging and symmetrical weight bearing
- Low impact cardiovascular conditioning including stationary bicycle, elliptical, treadmill walking
- Gait training with focus on active hip flexion and extension, symmetrical weight bearing, heel strike
- Forward and lateral step up progression
- Step down progression
- Proprioception/balance training
- Cryotherapy/modalities

MINIMUM CRITERIA FOR ADVANCEMENT

- Able to complete 6" step up with adequate control
- Symmetrical functional squat
- Swelling and pain controlled
- Ambulation on level surface with normal gait pattern
- Independent with ADL
- Independent with full HEP

EMPHASIZE

- Control swelling
- Functional strength
- Normalize gait pattern
- Reciprocal stair negotiation
- Encourage lumbopelvic and hip hinging dissociation

HIP ARTHROSCOPY WITH CORE DECOMPRESSION POST-OPERATIVE GUIDELINES

Post-Operative Phase 3: Weeks 7-12

PRECAUTIONS

- **No high impact activity for 12 weeks**

ASSESSMENT

- LEFS
- HOOS Jr.
- NPRS
- Hip active ROM
- LE flexibility
- Core strength
- Single leg squat
- 8" step up / down

TREATMENT RECOMMENDATIONS

- Improve LE flexibility based on findings
- Core strengthening
- Progress exercises that encourage lumbopelvic and femoropelvic dissociation
- Progressive resistance exercises of bilateral LE
- Leg press progression (double limb, eccentric, single limb)
- Progress stationary bicycle, walking on treadmill, elliptical, if tolerated
- Advance proprioception and dynamic/single leg balance exercise
- Continue step progressions for strength and function
- Address limitations throughout the kinetic chain that are affecting mobility
- Pool therapy if available

CRITERIA FOR DISCHARGE

- LE strength and ROM WFL
- Able to complete 8" step down with control
- Independent with all mobility tasks
- Independent with full HEP
- **Discharge or progress to Phase 3 if cleared by surgeon to return to sport or advanced functional activities**

EMPHASIZE

- Increase flexibility – emphasize hip extension, flexion and external rotation
- Increase strength – emphasize hip abduction and extension without compensation
- Gradual return to function/recreational activity
- Diminish frequency of physical therapy and progress towards independent HEP

HIP ARTHROSCOPY WITH CORE DECOMPRESSION POST-OPERATIVE GUIDELINES

Post-Operative Phase 4: Weeks 13-16

BEGIN ONLY IF RETURNING TO SPORT WITH SURGEON CLEARANCE

PRECAUTIONS

- Discuss with surgeon regarding which activities are permitted following core decompression

ASSESSMENT

- LEFS
- HOOS Jr.
- NPRS
- Hip ROM
- Flexibility
- Strength
- Single leg squat – minimum 10 reps
- Star Excursion test
- Kinetic chain during sport specific movement

TREATMENT RECOMMENDATIONS

- Eccentric quadriceps strengthening; hamstring and gluteal strength and control
- Core stabilization / endurance tasks
- Progressive resistance exercises
- Low-medium impact cardiovascular conditioning
- Low-medium impact agility drills
- Dynamic balance activities
- Sports-specific warm-up and activities
- Low impact plyometrics (hopping, skipping) progressing to appropriate impact depending on sport
- Consider working with a performance specialist specific to the sport or activity

CRITERIA FOR DISCHARGE

- Minimal symptoms worsening during exercise session and 24 hours after
- Adequate control with single leg squat
- Symmetrical LE strength
- Strength, ROM, flexibility throughout kinetic chain to meet sports specific demands
- Independent with full HEP

EMPHASIZE

- Neuromuscular patterning
- Gradual increase of loads to meet sports specific demands
- Optimize kinetic chain to meet sports specific demands

HIP ARTHROSCOPY WITH CORE DECOMPRESSION POST-OPERATIVE GUIDELINES

References

Hernandez A, Nuñez JH, Sallent A, et al. Core Decompression Combined with Implantation of Autologous Bone Marrow Concentrate with Tricalcium Phosphate Does Not Prevent Radiographic Progression in Early Stage Osteonecrosis of the Hip. *Clin Orthop Surg*. 2020 Jun;12(2):151-157.

Horstmann T, Listringhaus R, Brauner T, et al. Minimizing preoperative and postoperative limping in patients after total hip arthroplasty. *Am J Phys Med Rehabil*. 2013;92(12):1060-1069.

Hua KC, Yang XG, Feng JT, et al. The efficacy and safety of core decompression for the treatment of femoral head necrosis: a systematic review and meta-analysis. *J Orthop Surg Res*. 2019 Sep 11;14(1):306.

Neumayr LD, et al. Physical therapy alone compared with core decompression and physical therapy for femoral head osteonecrosis in sickle cell disease. Results of a multicenter study at a mean of three years after treatment. *J Bone Joint Surg Am*. 2006 Dec;88(12):2573-82.

Created: 1/2021