

# Rehabilitation Protocol for Hip Arthroscopy for Femoroacetabular Impingement

This protocol is designed to assist clinicians in managing the post-operative recovery following hip arthroscopy for femoroacetabular impingement (FAI). The protocol is both time-based, depending on tissue healing, and criterion-based, considering individual patient needs and clinical findings. The timelines and expected outcomes may differ based on the surgeon’s approach, additional procedures, and any complications that arise. Clinicians should consult the referring surgeon for guidance if needed.

## Post-Operative Considerations:

- **Capsular Closure:** Special attention is needed for patients who undergo capsular closure during surgery. This technique aims to restore normal anatomy and prevent post-operative instability. In the early stages of healing, it is crucial to limit hip external rotation and extension to safeguard the capsular repair. The integrity of the capsule is linked to better recovery outcomes in FAI cases.
- **Labral Repair or Reconstruction:** If the labrum was repaired or reconstructed, this detail will impact the rehabilitation process. In cases where the labral tissue is insufficient, the surgeon may perform a reconstruction using an autograft or allograft. Refer to the operative report for specific information on the labral procedure, as it will guide the rehab approach.

If the patient experiences fever, persistent numbness or tingling, excessive incision drainage, severe pain, or other concerning symptoms, the referring physician should be contacted promptly.

## PHASE I: IMMEDIATE POST-OP (WEEKS 0-3 AFTER SURGERY)

<b>Rehabilitation Goals</b>	<ul style="list-style-type: none"> <li>• Minimize pain and inflammation</li> <li>• Protect integrity of repair</li> <li>• Avoid post-operative adhesions</li> <li>• Improve pain-free AROM/PROM within stated parameters</li> <li>• Attain non-analgesic gait with use of device and appropriate weight bearing</li> <li>• Address muscle inhibition</li> <li>• Patient demonstrates independence with initial home exercise program</li> </ul>
<b>Weight Bearing</b>	<ul style="list-style-type: none"> <li>• Partial weightbearing 20 lbs, step-to pattern, foot flat gait with crutches</li> </ul>
<b>Range of Motion Limitations</b>	<ul style="list-style-type: none"> <li>• Hip Flexion: 0-90 deg</li> <li>• Hip Extension: 0 degrees, no motion beyond neutral</li> <li>• Hip Abduction: 0-30 degrees</li> <li>• Hip External Rotation: 0-30 degrees</li> <li>• Hip Internal Rotation: 0-30 degrees</li> </ul>
<b>Precautions/ Guidelines</b>	<ul style="list-style-type: none"> <li>• No active straight leg raises</li> <li>• Avoid ambulation to fatigue or pain</li> <li>• No active hip flexion for days 0-21, hip flexion should be self-assisted for functional mobility</li> <li>• No Gr III-IV hip joint mobilization for 1st 8 weeks</li> <li>• No long axis hip distraction for first 8 weeks for labral repair</li> <li>• No long axis hip distraction for first 12 weeks for labral reconstruction</li> <li>• Avoid pain and pinching in the hip at all times</li> </ul>

**PHASE II: INTERMEDIATE POST-OP**  
(WEEKS 2-3 AFTER SURGERY)

<p><b>Precautions/ Guidelines</b></p>	<p><i>Throughout rehabilitation period every effort should be made to avoid:</i></p> <ul style="list-style-type: none"> <li>• Hip flexor tendinitis</li> <li>• Synovitis of operative joint</li> <li>• Trochanteric bursitis</li> <li>• Lower back pain or sacroiliac pain</li> </ul>
<p><b>Interventions</b></p>	<p><i>Patient Education</i></p> <ul style="list-style-type: none"> <li>• Activity modification, bed mobility, positioning:             <ul style="list-style-type: none"> <li>o No crossing of legs</li> <li>o Avoid sitting for more than 30 minutes for first 2 weeks, vary position frequently throughout the day. Gradually increase sitting time as tolerated after first 2 weeks.</li> <li>o Sit with hip angle less than 90 degrees by sitting on a highchair or sit slightly reclined</li> <li>o Prone lying 15 minutes 2-3 times per day to avoid hip flexor contracture</li> <li>o Assist operative leg when getting in/out of bed, in/out of car and for all functional mobility</li> <li>o Consider obtaining raised toilet seat to avoid hip flexion greater than 90 degrees when sitting on toilet</li> </ul> </li> </ul> <p><i>Manual Therapy</i></p> <ul style="list-style-type: none"> <li>• Soft tissue mobilization as appropriate for quadriceps, hamstrings, TFL, gluteus medius, iliacus, psoas, quadratus lumborum, lumbar paraspinals. Avoid suture sites until sutures removed and incisions healed.</li> <li>• Joint mobilizations to lumbar spine/sacrum to address lumbosacral dysfunction as indicated</li> <li>• Gr I-II hip joint mobilizations for pain modulation as appropriate</li> <li>• Initiate small range hip circumduction and passive IR as indicated below</li> </ul> <p><i>Range of motion/Mobility</i></p> <ul style="list-style-type: none"> <li>• PROM small range hip circumduction at 70° Hip Flexion</li> <li>• PROM log rolls to internal rotation/external rotation</li> </ul> <p><i>Gait Training</i></p> <ul style="list-style-type: none"> <li>• Gait training with B axillary crutches maintaining indicated weight bearing</li> <li>• Stair training with step to pattern, maintaining indicated weight bearing with rail/assistive device</li> </ul> <p><i>Modalities</i></p> <ul style="list-style-type: none"> <li>• Cryotherapy as needed</li> <li>• Electrical stimulation for pain management as needed</li> </ul> <p><i>Therapeutic Exercise</i></p> <ul style="list-style-type: none"> <li>• Supine Ankle Pumps</li> <li>• Supine Quad Set</li> <li>• Supine Glute Set</li> <li>• Transversus Abdominis Activation Hooklying</li> <li>• Prone Knee Flexion</li> <li>• Passive Supine Hip Flexor Stretch</li> </ul> <p><i>Cardiovascular Exercise</i></p> <ul style="list-style-type: none"> <li>• Upright Stationary Bike</li> </ul>
<p><b>Criteria to Progress</b></p>	<ul style="list-style-type: none"> <li>• Minimal pain with ambulation</li> <li>• Non-antalgic gait with use of crutches</li> <li>• Minimal pain at rest</li> <li>• Patient able to perform exercise program without increase in baseline pain</li> <li>• Patient compliant with weight bearing, home exercise program, and activity precautions</li> </ul>

**PHASE II: INTERMEDIATE POST-OP**  
(WEEKS 4-6 AFTER SURGERY)

<p><b>Rehabilitation Goals</b></p>	<ul style="list-style-type: none"> <li>• Progress weight bearing as appropriate per timeline</li> <li>• Progress ROM as tolerated per protocol</li> <li>• Minimize pain and inflammation</li> <li>• Protect integrity of repair</li> <li>• Avoid post-operative adhesions</li> <li>• Improve pain-free AROM/PROM within stated parameters</li> <li>• Attain non-analgesic gait with use of device and appropriate weight bearing</li> <li>• Address muscle inhibition</li> <li>• Patient demonstrates independence with initial home exercise program</li> </ul>
<p><b>Weight Bearing</b></p>	<ul style="list-style-type: none"> <li>• Gradually increase weight bearing to WBAT pain-free</li> </ul>
<p><b>Range of Motion Limitations</b></p>	<ul style="list-style-type: none"> <li>• Flexion: gradually increase in pain free manner</li> <li>• Extension: 0 -10 degrees</li> <li>• Abduction: 0-45 degrees</li> <li>• External Rotation: 0-45 degrees</li> <li>• Internal Rotation: 0-45 degrees</li> </ul>
<p><b>Precautions/Guidelines</b></p>	<ul style="list-style-type: none"> <li>• No active straight leg raises for 8 weeks</li> <li>• No Gr III-IV hip joint mobilization for 1st 6 weeks</li> <li>• No long axis hip distraction for first 8 weeks for labral repair</li> <li>• No long axis hip distraction for first 12 weeks for labral reconstruction</li> <li>• Avoid pain and pinching in the hip at all times</li> <li>• Avoid functional activities that cause hip pain</li> </ul>
<p><b>Additional Interventions</b> *Continue with Phase I Interventions</p>	<p><i>Manual Therapy</i></p> <ul style="list-style-type: none"> <li>• Soft tissue mobilization as appropriate per earlier phases</li> <li>• Joint mobilizations to lumbar spine/sacrum to address lumbosacral dysfunction as indicated</li> <li>• Gr I-II hip joint mobilizations as appropriate</li> <li>• Scar mobilization to portal scars as appropriate</li> <li>• PROM small range hip circumduction at 70 degrees flexion</li> <li>• PROM log rolls to internal rotation/external rotation</li> <li>• PROM all motions within allowed ROM</li> </ul> <p><i>Gait Training</i></p> <ul style="list-style-type: none"> <li>• Increase to weightbearing as tolerated with bilateral axillary crutches and normalize gait pattern. Avoid contralateral pelvic drop.</li> <li>• As tolerated decrease to single crutch and normalize gait pattern.</li> <li>• Wean from crutches by 6-8 weeks as tolerated.</li> </ul> <p><i>Modalities</i></p> <ul style="list-style-type: none"> <li>• Cryotherapy as needed</li> <li>• Electrical stimulation for pain management as needed</li> </ul> <p><i>Therapeutic Exercise</i> Continuation of Phase I Exercises as deemed appropriate by treating physical therapist</p> <ul style="list-style-type: none"> <li>• Quadruped Rocking</li> <li>• Hip rotations on stool IR/ER</li> <li>• Prone B hip IR</li> <li>• Hook-lying Lumbar Rotation (small range)</li> <li>• Hip ABD/ADD Isometrics Hook-lying</li> <li>• Hook-lying Gluteal Set</li> <li>• Standing Knee Flexion</li> <li>• Quadruped Hip Extension Knee Slides for Operative Leg w/TrA Activation</li> </ul>

**PHASE II: INTERMEDIATE POST-OP**  
(WEEKS 4-6 AFTER SURGERY) CONTINUED

<p><b>Additional Interventions</b> *Continue with Phase I Interventions</p>	<ul style="list-style-type: none"> <li>• Quadruped 'Cat and Camel' Exercise</li> <li>• Supine Modified Thomas Stretch (operative leg straight)</li> <li>• Sidelying Piriformis Stretch</li> <li>• Bilateral Bridging</li> <li>• Standing Hip Abduction</li> <li>• Quadruped Hip Extension for Operative Leg</li> <li>• Standing Hip Extension to Neutral</li> <li>• Counter Plank</li> <li>• Single Leg Balance</li> <li>• Sidelying Clamshell in Neutral</li> <li>• Hip Internal Rotation Prone with Resistance</li> </ul> <p><i>Cardiovascular Exercise</i></p> <ul style="list-style-type: none"> <li>• Upright bike up to 20 minutes, 2 x per day with seat slightly elevated to minimize excessive hip flexion, no resistance</li> </ul>
<p><b>Criteria to Progress</b></p>	<ul style="list-style-type: none"> <li>• ROM within functional limits</li> <li>• Ascend/descend 8-inch step with good pelvic control</li> <li>• Good pelvic control during single-limb stance</li> <li>• Normalized gait without an assistive device</li> <li>• No joint inflammation, muscular irritation, or pain</li> <li>• Good neuromuscular control and optimal muscle firing patterns</li> </ul>

**PHASE III: LATE POST-OP**  
(WEEKS 7-12 AFTER SURGERY)

<p><b>Rehabilitation Goals</b></p>	<ul style="list-style-type: none"> <li>• Performance of exercise program without hip pain</li> <li>• Normalize hip ROM through appropriate ROM progression as outlined</li> <li>• Good activation of hip musculature without evidence of muscle inhibition</li> <li>• Normalized soft tissue of hip and lumbopelvic region</li> <li>• Normal gait without evidence of gait deviations</li> </ul>
<p><b>Weight Bearing</b></p>	<ul style="list-style-type: none"> <li>• 6-8 weeks post-op: Gradually wean from crutches, decrease to single crutch, then without device as tolerated</li> </ul>
<p><b>Range of Motion</b></p>	<ul style="list-style-type: none"> <li>• Continue to increase hip flexion gradually in a pain-free manner</li> <li>• Increase hip extension, abduction, external rotation, and internal rotation ROM to full as tolerated</li> </ul>
<p><b>Precautions/Guidelines</b></p>	<ul style="list-style-type: none"> <li>• No active straight leg raises for 8 weeks</li> <li>• No Gr III-IV hip joint mobilization for 1st 6 weeks</li> <li>• No long axis hip distraction for first 8 weeks for labral repair</li> <li>• No long axis hip distraction for first 12 weeks for labral reconstruction</li> <li>• Avoid pain and pinching in the hip at all times</li> <li>• Avoid functional activities that cause hip pain</li> </ul>
<p><b>Additional Interventions</b> *Continue with Phase I-II Interventions</p>	<p><i>Manual Therapy</i></p> <ul style="list-style-type: none"> <li>• Soft tissue mobilization per earlier phases</li> <li>• Joint mobilizations to lumbar spine/sacrum to address lumbosacral dysfunction as indicated</li> <li>• Gr III-IV hip joint mobilization as needed to address joint hypomobility</li> <li>• Long axis hip distraction if needed beginning at 8 weeks for labral repair</li> <li>• No long axis hip distraction for first 12 weeks for labral reconstruction</li> <li>• PROM small range hip circumduction at 70 degrees flexion</li> <li>• PROM log rolls to external and internal rotation</li> <li>• PROM all motions within allowed ROM</li> </ul>

**PHASE III: LATE POST-OP**  
(WEEKS 7-12 AFTER SURGERY) CONTINUED

<p><b>Additional Interventions</b> *Continue with Phase I-II Interventions</p>	<p><i>Gait Training</i></p> <ul style="list-style-type: none"> <li>• Normalize gait without device.</li> <li>• If patient has pain with ambulation continue to use 1 crutch and wean as tolerated</li> </ul> <p><i>Modalities</i></p> <ul style="list-style-type: none"> <li>• Cryotherapy as needed</li> <li>• Electrical stimulation for pain management as needed.</li> </ul> <p><i>Therapeutic Exercise</i></p> <ul style="list-style-type: none"> <li>• Sidelying Hip Abduction</li> <li>• Bridge with Alternating Leg Extension</li> <li>• Side Plank- modified (knees/forearm)</li> <li>• Modified Plank (knees/forearms)</li> <li>• Quadruped Alternating Leg Extension (progress to opposite arm/leg as tolerated)</li> <li>• Partial Range Squats (gradually increase to 90 degree squats)</li> <li>• Prone Hip Extension</li> <li>• Single Leg Forward Weight Shifts (progressing to Romanian dead lift)</li> <li>• Lateral Band Walk</li> <li>• Backwards Monster Walk with Band</li> <li>• Banded Hip Clamshell</li> <li>• Single Leg Balance with Clock Taps</li> <li>• Single Leg Balance with Hip ABD and Band Resistance</li> <li>• Single Leg Balance with Hip Ext and Band Resistance</li> <li>• Paloff Press</li> <li>• Standing IT Band Stretch</li> </ul> <p><i>Cardiovascular Exercise:</i></p> <ul style="list-style-type: none"> <li>• Upright stationary bicycle: gradually increase time and resistance as tolerated</li> <li>• Elliptical training: pedaling forward and backward if pain-free, gradually increase time and resistance as tolerated</li> <li>• Swimming: initiate flutter kick as tolerated, avoid frog kicking</li> </ul>
<p><b>Criteria to Progress</b></p>	<ul style="list-style-type: none"> <li>• ROM within normal limits pain-free</li> <li>• Alternate Ascend/Descend 8-inch step with good pelvic control no UE support</li> <li>• Good pelvic control during single-limb stance and dynamic balance</li> <li>• Normalized gait pain-free without an assistive device</li> <li>• No Pain at rest, ADL/IADL nor walking</li> <li>• Strength of operative hip 75% of contralateral hip</li> <li>• No joint inflammation, muscular irritation, or pain</li> <li>• Good neuromuscular control and optimal muscle firing patterns</li> </ul>

**PHASE IV: TRANSITIONAL**  
(WEEKS 12+ AFTER SURGERY)

<p><b>Rehabilitation Goals</b></p>	<ul style="list-style-type: none"> <li>• Independent home exercise program</li> <li>• Optimize ROM</li> <li>• <math>\geq 4/5</math> LE strength, <math>\geq 4/5</math> trunk strength</li> <li>• Improved dynamic balance</li> <li>• Pain-free ADL</li> <li>• Pain-free hip flexion with ADLs and functional mobility</li> </ul>
<p><b>Range of Motion</b></p>	<ul style="list-style-type: none"> <li>• If full hip ROM still not attained, continue to progress as tolerated</li> </ul>

**PHASE IV: TRANSITIONAL**  
(WEEKS 12+ AFTER SURGERY) CONTINUED

<p><b>Precautions/Guidelines</b></p>	<ul style="list-style-type: none"> <li>• No extreme combined ROM (e.g. flexion/IR, flexion/ER)</li> <li>• No plyometrics</li> <li>• No running</li> <li>• No squatting below 90 degrees</li> <li>• Avoid painful ROM</li> <li>• Avoid extreme combined hip ROM</li> <li>• No symptom provocation during ambulation, ADLs, or therapeutic exercise</li> <li>• Avoid pinching in operative hip with range of motion exercises</li> </ul>
<p><b>Additional Interventions</b> *Continue with Phase I-III Interventions</p>	<p><i>Manual Therapy</i></p> <ul style="list-style-type: none"> <li>• Soft tissue mobilization as appropriate per earlier phases</li> <li>• Joint mobilizations to lumbar spine/sacrum to address lumbosacral dysfunction as indicated</li> <li>• Gr III-IV hip joint mobilization as needed to address joint hypomobility</li> <li>• Long axis hip distraction if needed</li> </ul> <p><i>Modalities</i></p> <ul style="list-style-type: none"> <li>• Cryotherapy as needed</li> <li>• Electrical stimulation for pain management as needed</li> </ul> <p><i>Therapeutic Exercise</i></p> <ul style="list-style-type: none"> <li>• Progressive lower extremity and core exercises- progress exercises from prior phases by increasing challenge and resistance</li> <li>• Advanced balance exercises as appropriate for sport or desired recreation</li> <li>• Sport specific plyometrics and agility exercises as appropriate</li> <li>• Progress core strengthening as deemed appropriate by therapist</li> </ul> <p><i>Cardiovascular Exercise</i></p> <ul style="list-style-type: none"> <li>• Upright stationary bicycle: gradually increase time and resistance as tolerated</li> <li>• Elliptical training: pedaling forward and backward if pain-free, gradually increase time and resistance as tolerated</li> <li>• Swimming: initiate flutter kick as tolerated, avoid frog kicking</li> </ul>
<p><b>Criteria to Progress</b></p>	<ul style="list-style-type: none"> <li>• Y Balance Test Limb symmetry index 80% of uninvolved side</li> <li>• Strength of operative hip 90% of uninvolved side</li> <li>• Perform progressed exercise program without pain</li> <li>• No joint inflammation, muscular irritation, or pain</li> </ul>

**PHASE V: EARLY RETURN TO SPORT**  
(MONTHS 4 AFTER SURGERY)

<p><b>Rehabilitation Goals</b></p>	<p><i>Please note: Individuals who do not engage in higher level activities may not need to progress to advanced and sport specific activities.</i></p> <ul style="list-style-type: none"> <li>• Progress to sport specific training without pain</li> <li>• Progress to jogging pain free when cleared by surgeon</li> <li>• Independent home exercise program</li> <li>• Optimize ROM •5/5 LE strength, &gt;=4/5 trunk strength</li> <li>• Normal Muscle Length of B LE</li> <li>• Good, dynamic unilateral balance of operative extremity</li> <li>• Pain-free with all activities</li> </ul>
<p><b>Precautions/Guidelines</b></p>	<ul style="list-style-type: none"> <li>• Avoid pain in hip joint with functional activities or exercises</li> <li>• If post-exercise joint pain or limping occurs, activity level should be decreased</li> <li>• Avoid joint inflammation</li> <li>• Focus on quality of movement and exercise</li> </ul>

**PHASE V: EARLY RETURN TO SPORT**  
 (MONTHS 4 AFTER SURGERY) CONTINUED

<p><b>Additional Interventions</b>          *Continue with Phase II-IV Interventions</p>	<p><i>Manual Therapy</i></p> <ul style="list-style-type: none"> <li>• Soft tissue mobilization as appropriate for per earlier phases</li> <li>• Joint mobilizations to lumbar spine/sacrum to address lumbosacral dysfunction as indicated</li> <li>• Gr III-IV hip joint mobilization as needed to address joint hypomobility</li> <li>• Long axis hip distraction as needed for labral repair or reconstruction</li> </ul> <p><i>Modalities</i></p> <ul style="list-style-type: none"> <li>• Cryotherapy as needed</li> <li>• Electrical stimulation for pain management as needed</li> </ul> <p><i>Therapeutic Exercise</i></p> <ul style="list-style-type: none"> <li>• Progress strength, proprioception, dynamic balance, agility, and power to address sport specific demands. Sport specific retraining as tolerated.</li> </ul> <p><i>Cardiovascular Exercise</i></p> <ul style="list-style-type: none"> <li>• Upright stationary bicycle: gradually increase time and resistance as tolerated</li> <li>• Elliptical training: pedaling forward and backward if pain-free, gradually increase time and resistance as tolerated</li> <li>• Swimming: gradually progress time and swimming strokes at tolerated</li> <li>• Jogging: initiate at 16-18 weeks as indicated by referring surgeon and patient status</li> </ul>
<p><b>Criteria to Discharge</b></p>	<ul style="list-style-type: none"> <li>• Cross over triple hop for distance 90% of uninvolved side</li> <li>• Y Balance Test Limb symmetry index 80% of uninvolved side</li> <li>• Patient able to jog 30 minutes</li> <li>• Patient able to perform sport specific drills without pain</li> <li>• Good neuromuscular control and optimal muscle firing patterns</li> </ul> <p><i>Outcome Measures:</i></p> <ul style="list-style-type: none"> <li>• Hip Outcome Score (HOS)             <ul style="list-style-type: none"> <li>◦ If unavailable, Lower Extremity Functional Scale (LEFS) may be used</li> </ul> </li> </ul>

For further assistance or to schedule an appointment, please contact **iOrtho - The Orthopedic Institute** at **833-464-6784** or visit our website at **iorthomd.com** to text/email us. Our team is dedicated to providing personalized care and guidance throughout your rehabilitation journey.