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## **Rehabilitation Following Hip Femoroplasty and Labrum Repair**

**Precautions:**

- Partial flat foot weight bearing (FWB) with crutches for 2-4 weeks
- Protect against excessive forces onto hip joint
- No hip flexion beyond 90<sup>o</sup> flexion
- Avoid external rotation for 4-6 weeks
- Protect against torsional twisting forces
- Limit aggressive functional activities until 12 weeks or as advised by Physician

**General Guidelines:**

- *Range of Motion:* Active assistive range of motion exercises are begun early (the first 2-5 days after surgery), but maximum motion in any plane is determined by where the patient feels discomfort and stretching should only be pushed to tolerance. Pushing to extremes of motion does not enhance function and will increase discomfort and prolong rehabilitation. Similar to weight bearing status, there may be some procedures that limit the extent of range of motion to allow appropriate healing.

- *Strength:* Muscle strengthening exercises are to be performed during the first week after surgery, but progressive strengthening depends upon the patient's tolerance. Patients should avoid exercises that engage the iliopsoas during the first several weeks after surgery. Iliopsoas tendonitis is a known side effect of hip arthroscopy but can be avoided with appropriate post-operative care, including avoiding exercises that have high activity of the iliopsoas (such as straight leg raises, resisted hip flexion, abductor strengthening that incorporates significant co-contraction). If the patient had an abductor repair, abductor strengthening will be limited early in the rehab process to allow the tendon to heal back to the bone.

### **I. Phase I – Immediate Postoperative Phase Protective Phase (Day 1 to Week 6)**

[1<sup>st</sup> visit within 2 days from surgery; 2 visits per week]

Goals: Gradually restore ROM & Flexibility, diminish pain and inflammation, restore muscular strength, restore normal pain free gait, protect repair

Precautions:

- Use axillary crutches for normal gait. Begin with flat-foot partial weight bearing and progress to 20-30 lbs. in second week. Wean from crutches slowly when gait is normalized and pain free which normally takes 2 -3 weeks

- Avoid active hip flexion past 90° and avoid passive range of motion (PROM) that causes any pinching type pain
- Avoid exercises that engage the iliopsoas during the first several weeks after surgery (such as straight leg raises, resisted hip flexion, abductor strengthening that incorporates significant co-contraction)
- Avoid passive unilateral extension for 3 weeks (prone lying and prone on elbows is okay)
- Avoid external rotation (ER) greater than 20° for the first 3 weeks
- Limit abduction to 45° for 2 weeks

Exercises:

**Week 1 :**

- Crutches to control weight bearing forces (**Flat-foot WB with crutches for 2-4 weeks**)
- Perform knee to chest stretch (easy & pain-free- 5x hourly)
- Ankle pumps , Gluteal sets, Quad sets
- Hip adduction isometrics (pillow squeezes)
- Heel slides
- AAROM Hip, PROM Hip & Knee
- Pelvic tilts
- Double leg bridges
- Prone positioning – Prone on elbows, prone knee flexion
- Recumbent Stationary bike respecting ROM restrictions (start POD1)
- No SLR flexion for 4-6 weeks
- Seated knee extensions
- UBE & upper body strengthening

**Week 2:**

- Stationary bicycle **10 min if tolerated**
- Supine marching
- Isometric add/abduction
- Standing Hip abduction & adduction (no resistance)
- Ankle pumps
- Supine knee bent trunk rotations
- Joint mobilizations (Grades I & II)

**Week 3:**

- Continue all exercises listed above
- Continue to perform AAROM & PROM exercises
- Hip flexion, IR/ER in pain-free range
- 1/4 mini squats, heel raises
- Single leg bridges
- Clam shells in pain free range
- Stiffness dominant hip mobilizations (oscillations grades III & IV)
- Straight leg raises – (sidelying hip abduction & adduction)
- Gravity eliminated SLR flexion (sidelying)
- Standing hip extension
- Kneeling hip flexor stretch

- Quadruped progression 4-point → 3-point → 2-point support
- Seated on stability ball (knee extensions, pelvic control exercises)
- Progress strengthening program (painfree)

Cardiovascular: Upper body circuit training or upper body ergometry (UBE)

## **II. Phase II – Intermediate Phase: Moderate Protection Phase (Weeks 4-8)** [2 visits per week]

Goals: Restore full pain-free motion, Prevent muscular inhibition, Normalize gait without crutches, single leg control, Good control and no pain with functional movements (including step up/down, squat, partial lunge)

### Criteria for progression to Phase II:

- 1) minimal pain with phase 1 exercise
- 2) minimal ROM limitations
- 3) Normalized gait with one crutch

### Precautions:

- Post-activity soreness should resolve within 24 hours
- No ballistic or forced stretching
- Avoid post-activity swelling or muscle weakness
- Be cautious with repetitive hip flexion activities, such as treadmill and StairMaster

### Exercises:

- Continue to progress isotonic strengthening program
- Continue all ROM, flexibility & stretching exercises
- Gradually increase time & resistance on stationary bicycle
- Gradually improve ROM through AAROM, PROM & stretching
- If hip develops stiffness – initiate hip mobilizations (grades III & IV)
- Wean off crutches after 4 weeks
- Standing resisted adduction, abduction, extension (4-way hip)
- Leg press to 75 deg hip flexion with adductor activation
- Clamshells
- Forward and lateral cone walks with ball toss (5 weeks)
- Initiate elliptical (5 weeks)
- Abdominal exercises
- Non-impact hip and core strengthening – body boards, bridging (progressing from double to single leg), mini band drills, Swiss ball drills
- Non-impact balance (progressing to single leg) and proprioceptive drills
- Half kneeling progression: stability, to reaching, to rotation, to resisted rotation.
- Quadriceps strengthening
- Single leg balance with perturbation
- Leg press
- Physioball hamstring

- Supermans
- Knee extension, hamstring curls
- Manual or theraband PNF
- Sidestepping with theraband, monsters

Cardiovascular Exercise:

Non-impact endurance training; stationary bike, NordicTrack, swimming, deep water run, cross trainer

**III. Phase III – Advanced Exercise Phase (Weeks 9-12)** [1-2 sessions per week]

Goals: Initiate proprioception exercises, Progressively increase muscle strength and endurance, Good control and no pain with sport/work specific movements, including impact activities

Criteria for progression to Phase III:

- Normal gait on all surfaces
- Ability to carry out functional movements without unloading affected leg or pain, while demonstrating good control
- Single leg balance greater than 15 seconds;
- No pain or tenderness with functional drills &/or activities

Precautions:

- Post-activity soreness should resolve within 24 hours
- No ballistic or forced stretching
- Avoid post-activity swelling or muscle weakness
- Be cautious with repetitive hip flexion activities, such as treadmill and StairMaster

Exercises:

- Continue to progress isotonic strengthening program
- Continue all ROM, flexibility & stretching exercises as needed
- Multi-planar strength progression, including forward, lateral and diagonal lunges
- Impact control exercises beginning 2 feet to 2 feet, progressing from 1 foot to other and then 1 foot to same foot then progress from single plane drills to multi-plane drills
- Dynamic control exercise beginning with low velocity, single plane activities and progressing to higher velocity, multi-plane activities
- May use agility ladder
- Progress to running program once patient is able to demonstrate good single leg landing control in a repetitive fashion without pain
- Begin sport specific drills once patient demonstrates good control with the impact control and multi-plane exercises and can tolerate running program without pain
- Sport/work specific balance and proprioceptive drills
- Hip and core strengthening
- Stretching for patient specific muscle imbalances

Cardiovascular Exercise: replicate sport/work specific energy demands

**IV. Phase IV – Return to Activity/Competition Phase (Weeks 12+)** [mostly home program with supervision]

- Running progression
- Sports specific drills
- Traditional weight training
- Continue all stretching & flexibility exercises
- Full squats
- Single stability ball bridges
- Step-ups
- Lunges (single plane to triplanter with resistance)
- Cone walks forward and lateral with ball toss and sport cord
- Single leg body weight squats
- Step downs, step ups lateral
- Initiate tubing lifts with rotation w/ cable on 1 knee

**Criteria to Return to Competition:**

- Full pain-free ROM & flexibility
- Hip strength equal to opposite side
- Single leg pickup with level pelvis
- Ability to perform sport specific drills at satisfactory level & without pain
- Satisfactory Clinical Exam
- Approval by Physician