

# COMBINED HIP ARTHROSCOPY AND PERIACETABULAR OSTEOTOMY (PAO) REHAB GUIDELINES

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These guidelines should be tailored to individual patients based on their rehab goals, age, precautions, quality of repair, etc. Progression should be based on patient progress and approval by the referring physician.

## **PHASE 1 (Weeks 1-8)**

### **HOME THERAPY EXERCISES:**

- Week 1
- Quad sets, ankle pumps, glute sets, short-arc quad, stationary bike without resistance 20 min per day
- Week 2
- Supine hip abduction, supine hip and knee bending (heel slides), standing hip flexion, hip PROM
- Weeks 3-4
- FABER and hamstring stretch, standing hip and knee flexion
- Outpatient PT to start weeks 3-4

### **GENERAL GUIDELINES AND PRECAUTIONS:**

- Protect hip through limited (TDWB) and education on avoidance of pain
- Reduce pain to 0/10 at rest and with ambulation
- Normalize gait with cane, crutch or walker
- Restoration of leg control
- Avoid sitting for more than 1 hour with hips flexed past 90 degrees or more
- Avoid walking to the point of fatigue (maintain short frequent walks)
- No extension past neutral, avoid ER, no crossing the legs
- No long lever arm hip flexion such as straight leg raise
- No open chain isolated muscle exercises such as side lying hip abduction or prone hip extension
- 20lb foot flat weight bearing with crutches or walker
- Do not push through pain with strengthening or ROM

### **SUGGESTED EXERCISES/TREATMENTS:**

- Scar massage of incisions once healed
- PROM of hip
- Joint mobilizations begin at week 3-4
- Can add resistance to stationary bike at week 4
- Supine abdominal sets, prone abdominal sets with pillow under hips, quad sets, ankle pumps
- Short arc quads, long arc quads, standing hamstring curls
- Isometric hip: abduction/adduction, IR/ER, bridge without lifting hips, prone heel squeeze with pillow under hips

### **PROGRESSION CRITERIA:**

- Normal gait with assistive device; DO NOT LIMP!
- Flexion to 100 degrees

- No hip flexor contracture

## **PHASE 2 (Weeks 6-12)**

### **GUIDELINES AND PRECAUTIONS:**

- Can start with Aquatic therapy and transition to land
- Normalize gait with progression to WBAT (8 weeks) with 2 crutch to 1 crutch to no crutch
- Ascend and descend a stair step without pain
- Demonstrate hip control, pelvic stability and no pain with restoration of ADLs
- Use a cane or crutch if limping; DO NOT LIMP!!
- Hip flexor pain and soreness is common at this stage, especially straight leg raising; rest if needed
- Avoid faulty movement patterns and standing postures
- Can begin aquatic therapy

### **SUGGESTED EXERCISES/TREATMENTS:**

- Hip AROM with a stable pelvis; bent knee fallout, heel slides and windshield wiper
- Open chain AROM: standing hip abduction and hip extension to neutral
- Prone lying (tummy time) progressing to prone knee bending, then prone posterior pelvic tilts to work towards functional hip extension
- Closed chain squats, step-ups/downs, static lunge stance and leg press
- Standing gluteus medius exercises: side steps with thera-band, single leg stand and balance exercises
- Mini-squats, double knee bends to 90 deg, step ups forward and lateral, leg press
- Prone IR/ER rhythmic stabilization exercise
- Balance and proprioceptive: narrow stance double leg, single leg, single leg w/ contralateral leg resistance, Romanian deadlift, upper extremity reaches
- Hamstring curls, physio ball bridging knee bends, carpet drags, bridge walk out

### **PROGRESSION CRITERIA:**

- Normal gait on all surfaces without assistive device
- Good pelvic control during single leg balance for 15s
- ROM that allows for functional movements without offloading affects leg or pain with good hip control
- Able to ascend/descend stair step with good pelvic control

## **PHASE 3 (Weeks 12-18)**

### **GUIDELINES AND PRECAUTIONS:**

- Restore multi-directional strength
- Limb strength and stability to allow for impact
- Glute endurance
- Pain free ADLs
- Symmetry with y-balance test
- No forced stretching
- Avoid pain with repetitive hip flexion such as Stairmaster or treadmill

- Avoid spine and pelvic compensation with functional movements
- No impact activities until 3 months post-op AND demonstrates adequate hip and lower extremity control

#### **SUGGESTED EXERCISES/TREATMENTS:**

- Gait and functional movement drills
- Core strength with progression from quadruped to standing double-leg to single leg, start with single plane then multiplane
- Hip abduction strength: side-lying and functional closed chain, monster walk and banded side stepping, curtsy lunge, single leg Romanian dead lift
- Aggressive hip rotator strength: lunge stance single arm rows and punches with and without pelvic rotation; progress to chops and steps
- Single leg press, advanced step ups, pistol squats
- Hex bar deadlift
- Ball planks
- Lateral lunges
- Sport specific Balance and proprioception
- When strong enough impact exercises begin with 2 feet to 2 feet, then 1 foot to other foot, then 1 foot to same foot; progress from single plane to multi-plane

#### **CARDIOVASCULAR:**

- Cycling, elliptical and water running

#### **PROGRESSION CRITERIA:**

- 5/5 Lower extremity strength
- Good pelvic control with single limb activities
- Hip ROM to meet all ADLs

#### **PHASE 4 (Weeks 18 to sports test)**

##### **GUIDELINES AND PRECAUTIONS:**

- Restore multi-direction strength
- Pass functional hip sports test
- *Clin Sports Med. 2011 Apr;30(2):463-82. doi: 10.1016/j.csm.2011.01.001. Rehabilitation after hip femoroacetabular impingement arthroscopy. Wahoff M, Ryan M.*
- Restore plyometric strength
- Limited post-exercise soreness
- Walk >1 mile without limping

##### **SUGGESTED EXERCISES/TREATMENTS:**

- Maximize ROM
- Introduce plyometrics, cutting and running
- Stretch for patient specific muscle imbalances
- Increase time on double knee bends with resistance
- Increase time on single knee bends. Add resistance as tolerated
- Forward backward jog exercises with sport cord
- Lateral Agility exercise with diagonals

- Jump-land training
- Advanced perturbation, balance and stability exercises
- Continue with cardio training

**PROGRESSION CRITERIA:**

- Pass hip sports test; score >17

**PHASE 5 Return to Sport (6 months to 1 year)**

**STRENGTH AND AGILITY DRILLS:**

- Chop-downs
- Back pedals
- W-cuts, Z-cuts
- Cariocas
- Cutting Drills
- Sports specific drills
- Return to play begin at 50% participation and advance to 100%

*Sources:*

1. *Panorama Orthopedics & Spine Center Combined Hip Arthroscopy and Ganz Osteotomy PT Protocol.*  
<https://www.panoramaortho.com/wp-content/uploads/2015/02/Combined-PAO-Hip-Arthroscopy-Postoperative-Physical-Therapy-Protocol.pdf>
2. *UW Sports Medicine Rehabilitation Guidelines for PAO of the Hip.*  
[https://www.uwhealth.org/files/uwhealth/docs/sportsmed/SM-174372\\_Hip\\_PAO\\_Rehab\\_final.pdf](https://www.uwhealth.org/files/uwhealth/docs/sportsmed/SM-174372_Hip_PAO_Rehab_final.pdf)
3. *Clin Sports Med.* 2011 Apr;30(2):463-82. doi: 10.1016/j.csm.2011.01.001. *Rehabilitation after hip femoroacetabular impingement arthroscopy.* Wahoff M, Ryan M.