Periacetabular osteotomy

Phase I: Protective Phase

Weeks 1-4

Goals

• Control pain
• Neutralize muscle atrophy
• Promote healing of tissues

Precautions

• Touch-down weight-bearing (20 to 30 pounds)
• Avoid prone lying
• Minimize active hip flexion
• Hip flexion range of motion (ROM) limited to 30 to 80 degrees
• Sleep with pillows under involved leg

Suggested exercises

Glute sets

Quad sets

Hamstring sets

Isometric hip adduction

Other exercises to add:

• Ankle pumps
• Isometric hip abduction
• Transverse abdominis activation
Phase II: Early Mobilization Phase

**Goals**

- Increase ROM within tolerance
- Neutralize muscle atrophy
- Control pain

**Precautions**

- Touch-down weight-bearing during Weeks 6-8 (physician discretion)
- Gentle ROM within tolerance
- Lay prone if lacking hip extension
- Avoid exercises with long lever arms (no single-leg raises)

**Joint mobilizations**

- Grade III and IV joint mobilizations may be performed to increase ROM; long axis distraction may be performed for pain

**Suggested exercises**

- Supine hip abduction
- Supine bridging
Other exercises to add:
- Bike for cardio (no resistance)
- Hamstring curls
- Seated marching
Phase III: Progressive Strengthening Phase

Weeks 8-12

**Goals**
- Normalize gait in full weight-bearing (FWB)
- Regain muscle strength and symmetry

**Precautions**
- Progress to FWB per physician clearance

**Suggested exercises**

![Prone hip extension](image1)
![Side-lying hip abduction](image2)
![Supine hip flexion](image3)
![Single-leg bridging](image4)

**Other exercises to add:**
- Side-lying hip adduction
- Single-leg stance
- Leg press
- Progress core stabilization
- Gradually add resistance to bike

![Mini squats](image5)
![Step-ups](image6)
![Wall sits](image7)
Phase IV: Functional Strengthening Phase

**Weeks 12-16**

**Goals**
- Progressive functional strengthening

**Precautions**
- Progress strengthening within pain tolerance

**Suggested exercises**
- Single-leg squat
- Single-leg deadlift
- Lunges

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Phase V: Return-to-Sport Phase

**Week 16 and beyond**

**Goals**
- Improve cardiovascular endurance
- Continued functional strengthening
- Sport-specific training

**Precautions**
- Criteria to begin running progression:
  - Cleared by physician
  - Non-antalgic normalized gait pattern
  - Patient performs single-leg squat with proper mechanics (no trendelenburg, dynamic genu valgum or lateral trunk lean)

**Suggested exercises**
- Agility drills
- Plyometrics
- Sport-specific training
- Running progression

**Discharge criteria:**
- Run with non-antalgic gait and no trendelenberg
- Cutting and agility drills performed with proper form and no hesitation on involved side
- Performance of jumping activities with proper mechanics
- Physician clearance