WESTERN ORTHOPAEDICS

Excellence in Motion

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# Total Hip with Open Gluteus Medius Repair PT Protocol

The goal of this protocol is to provide some guidance for rehabilitation after gluteus medius repair. Often the gluteus medius is torn for some time before it's repaired, and there is often some baseline atrophy to the muscle itself. While the repair is strong and augmented biologically, it needs time to heal and to be protected during this time. It is critical that the repair is not over used during the first 4 to 5 months. It takes time for the tendon to heal down to bone and during this time, the patient cannot limp or overstress the repair because this will only compromise the final strength of the tendon attachment. Gains in the strength of the muscle can be made with gradual progression and persistence for up to two years. Please be thoughtful with regard to rehabilitation and progression as not all of these patients need to return to sport. Some patients only need to regain basic function and maintain a level pelvis with ambulation. The timeline between advancement to next phases needs to be individualized as all patients likely begin at a different baseline and heal and strengthen at different rates.

A limp or Trendelenburg gait should not be allowed during this rehabilitation process as it will wear out the repair or compromise ultimate healing. Use an assistive device as long as it is needed to maintain a level pelvis with ambulation and with all exercises.

# Phase 1- Protection Phase Post Op Weeks 0-8

### **Weight Bearing:**

- 20% Flat Foot weight bearing x 6 weeks
- Gradual progression of weight bearing for 6-8 weeks with crutches to 100% weight bearing
- Wean off of assistive device by week 8 without Trendelenburg gait or limp. It is ok to use an assistive device longer if needed to avoid a limp.

### **Initial ROM Related Restrictions for 6 Weeks:**

- For Total Hips:
  - Posterior Hip Precautions
    - No internal rotation
    - No adduction across midline
    - No Flexion past 90° (this includes flexing the torso, such as sitting and leaning forward to reach for an object)
- For Open Gluteus Medius Repair:
  - No active abduction for 6 weeks
  - No passive or active cross body adduction for 6 weeks
  - Use pink wedge pillow at night for 6 weeks

### Goals:

- Reduce swelling and pain
- Restore mobility within limitations
- Restore normal gait with protective weight bearing
- Promote normal proprioceptive and neuromuscular control

### **Pain and Swelling:**

- PRICE Protection, Rest, Ice, Compression, Elevation
  - o At a minimum 5-6 times per day for 20-30-minute sessions
  - o There is no maximum!
  - o Ankle Pumps for swelling and DVT prevention

### **Range of Motion:**

- Active/Active Assistive Range of Motion
  - May begin quadruped rocking and cat/camel
  - Upright stationary bike without resistance 20 minutes per day starting week 3 based on comfort
    - No recumbent biking
- Initiate Thomas stretch at week 3

# **Phase 1 Continued - Advancing Protection Phase**

Post Op Weeks 6-12

# **Range of Motion:**

- For Total Hip Arthroplasty:
  - o May begin flexing more than 90°
  - o May begin to internally rotate
  - o May adduct across midline
  - o <u>IMPORTANT</u>: you should never do all three of these range of motion exercises at once; this is a precaution that will be in place indefinitely
- For Open Gluteus Medius Repair:
  - Progress to weight bearing as tolerated
  - Progress off of assistive device (no limp or Trendelenburg with this progression; if still limping, continue to use assistive device); OK to use assistive device longer if needed
  - Active assistive use of glute medius may begin

### **Aquatic Therapy:**

- Begin at week 6 post-operatively once the incisions are healed and there is a chair to get into/out of the pool
- Motor control and ROM exercises
- Circumduction, hip extension, 1/3 squats
- Forwards and backwards gait with emphasis on full hip extension and an upright trunk
- Focus on normalization of gait in more buoyant environment

### **Strength/Motor Control:**

- Isometrics: Quad Sets, Glute Sets, Transverse Abdominis Isometrics
- Edge of bed hip extension
- Standing Skaters (abduction with IR) for gluteus medius
- Tall kneeling with controlled rotation and pelvic tilt

## **Proprioception and Neuromuscular Re-education:**

- Prone IR/ER rhythmic stabilization exercises
- Quadruped stabilization exercises
- ½ kneeling for stability prior to full weight bearing
- Standing forward flexion (limit to 45°)

# **Phase 2- Initial Strengthening Phase**

Post Op Weeks 9-12

# **Criteria for advancement to Phase 2:**

- Pain-free passive hip flexion and abduction
- Able to maintain full bridge position without compensations
- Mild deviations in gait with no discomfort and no Trendelenburg
- Maintain stable tall kneeling position without anterior hip discomfort

#### Goals:

- Full passive and active ROM including pain-free standing hip flexion
- Rotary stability including side and front planks without compensation or pain
- Normalize gait
- Increase leg strength to allow for:
  - Walking longer distances
  - Stair descending without compensation
  - o Double leg bridge maintaining level pelvis
  - Single leg bridge maintaining level pelvis
  - o Double knee bends without compensation
  - o Single knee bend to 70<sup>o</sup> without compensation
  - o Single leg balance without Trendelenburg sign/gait

## Strength, Proprioception and Neuromuscular Re-education:

- Closed chain double leg strength and stability exercises at therapist's discretion. Include
  multiplanar strength and proprioception; bridging progression, closed chain hip abduction
  strength, leg press/shuttle, balance as well as core stability
- No resisted abduction until 12 weeks post op

### Cardio:

- Bike gradually increasing resistance at week 10 or when patient can ambulate without a limp; limit to a maximum of 30 minutes total for the first two weeks then continue to progress gradually if there is no increased hip pain
- Elliptical trainer beginning at week 10-12
- Swimming without leg kick (using a pool buoy) beginning at week 8
- Swimming with kicking allowed at week 12 only if there is no hip flexor pain

# Phase 3- Advanced Strengthening (Sport Specific Training) Post Op Weeks 12+

### **Criteria for Advancement to Phase 3:**

- Full active and passive ROM
- Ascending and descending stairs with involved leg without pain or compensation
- Gait without deviations or pain after 1 mile of walking on level surface
- At least 1 minute of double knee bends without compensation
- Single knee bends to 70° flexion without compensation
- Rotary stability and ability to hold plank
- Active strengthening of the glute medius may begin. Gentle at first. May do more aggressive strengthening at 4-5 months

#### Goals:

- Continue progression of ambulation without tolerance of Trendelenburg gait
- Active strengthening of glutes
- Restore multi-directional strength, agility & core stability
- Restore ability to absorb impact on leg (plyometric strength), depending upon patient goals
- Full extension for normal running mechanics

# Phase 4 - Return to Sport 6+ months Post Op

### **Criteria for advancement to phase 4:**

- Bilateral 1-minute single leg stance with alternate hip flexion/extension
- Resisted single leg squat for 3 minutes

<sup>\*\*</sup>No running or kicking activities until a minimum of 5 months and patient is able to demonstrate pain-free standing repetitive hip flexion\*\*

<sup>\*\*</sup>Closed chain Pilates is recommended for hip maintenance and can be very helpful in the final phase of PT to address late muscular imbalance and maintain posterior chain strength\*\*