



## ***Total Hip Arthroplasty***

### *(Posterior Approach) Rehabilitation Guideline*

This rehabilitation program is designed to return the individual to their activities as quickly and safely as possible. It is designed for rehabilitation following a posterior approach total hip arthroplasty. Modifications to this guideline may be necessary depending on physician-specific instruction or other procedures performed. This evidence-based posterior total hip arthroplasty guideline is criterion-based. Time frames and visits in each phase will vary depending on many factors including patient demographics, goals and individual progress. This guideline is designed to progress the individual through rehabilitation to full sport and activity participation. The therapist may modify the program appropriately depending on the individual's goals for activity following posterior total hip arthroplasty.

This guideline is intended to provide the treating clinician with a frame of reference for rehabilitation. It is not intended to substitute clinical judgment regarding the patient's post-operative care based on exam or treatment findings, individual progress and/or the presence of concomitant procedures or post-operative complications. If the clinician should have questions regarding post-operative progression, they should contact the referring physician.

# General Guidelines/Precautions:

- Recommend assistance/supervision for 72 hours post- discharge- specific level of assistance will be determined on an individual basis
- Full hip ROM at 12-16 weeks compared to unaffected side
- Communicate with physician regarding:
  - o Weight-bearing status
  - o Length of restrictions for high-impact activities
  - o Dislocation precautions
    - No hip flexion beyond 90 degrees
    - No hip internal rotation beyond neutral
    - No hip adduction beyond neutral for 6-12 weeks
  - o Recommend outpatient PT starting in the first week after surgery
    - Advancement of HEP
    - Determine additional goals and timelines
  - o Return to recreational sport
    - Must demonstrate sufficient hip mobility and strength, and obtain physician clearance
- Outcomes
  - o Patient Reported: FOTO, LEFS, WOMAC, HOOS, JR
  - o Performance tests: 30-Second Chair Stand Test, gait speed (10MWT), TUG, 6MWT, Berg

# Posterior Total Hip Arthroplasty Rehabilitation Guideline

PHASE	SUGGESTED INTERVENTIONS	GOALS/MILESTONES FOR PROGRESSION
<p><b>Phase I</b> Patient Education Phase Pre-op Phase</p>	<p><b>Discuss:</b></p> <ul style="list-style-type: none"> <li>Anatomy, existing pathology, post-op rehab schedule, bracing and expected progressions</li> </ul> <p><b>Instruct on pre-operative exercises:</b> Prospective joint replacement candidates will participate in pre-op education individually or in a class setting which includes instruction in:</p> <ul style="list-style-type: none"> <li>Home safety</li> <li>Equipment recommendations</li> <li>Pre-surgical LE exercises</li> </ul> <p>Overview of hospital stay per region may include but is not limited to:</p> <ul style="list-style-type: none"> <li>Nursing care</li> <li>Therapy services</li> <li>Pharmacy</li> <li>Discharge planning</li> </ul>	<p><b>Goals of Phase:</b></p> <ol style="list-style-type: none"> <li>Understanding of pre-op exercises, instructions and overall plan of care</li> </ol> <p><b>Criteria to Advance to Next Phase:</b></p> <ol style="list-style-type: none"> <li>Surgery</li> </ol>
<p><b>Phase II</b> Inpatient/Acute Care Phase  Post-Op 0-3 days</p>	<p><b>Immediate post-operative instructions:</b> Patient and family/coach education and training in an individual or group setting for:</p> <ul style="list-style-type: none"> <li>Safety with mobilization and transfers</li> <li>Edema control (icing and elevation)</li> <li>HEP</li> <li>Home modification</li> </ul> <p><b>Track 1: Patients who have OPPT starting within the first week post-op or are discharging to a swing bed or SNF</b></p> <p><b>Home Exercise Examples:</b> <b>Supine:</b> Ankle pumps, quad sets, hamstring sets, gluteal sets, assisted heel slides, SAQ, hip abduction, gentle external and internal rotation to neutral <b>Seated:</b> Long arc quad and knee flexion</p> <p><b>HEP:</b> Two times per day in hospital and at home</p> <p><b>Track 2: Patients who do not have OPPT starting within 10-14 days post-op or are discharging to a swing bed or SNF</b></p> <p><b>Home Exercise Examples:</b> <b>HEP from Track 1</b> <b>Standing:</b> Hip flex with knee bend, knee flex, heel raises, terminal knee extension, hip extension, hip abduction and mini-squats</p> <p><b>HEP:</b> Supine and seated exercises one time per day and standing exercises one time per day</p>	<p><b>Goals of Phase:</b></p> <ol style="list-style-type: none"> <li>Protect healing tissue</li> <li>Pain and edema control (compression garments)</li> <li>DVT prevention (Well's criteria)</li> <li>Improve pain-free ROM</li> <li>Muscle activation</li> </ol> <p><b>Functional goals:</b></p> <ol style="list-style-type: none"> <li>SBA transfers</li> <li>SBA bed mobility with or without leg lifter</li> <li>SBA ambulation household distances with appropriate AD</li> <li>CGA stair negotiation with appropriate AD</li> <li>Min A for car transfer with or without leg lifter</li> <li>SBA for bathing</li> <li>SBA for dressing with or without adaptive equipment</li> <li>CGA for shower transfer with appropriate modification</li> <li>SBA for toilet transfer with appropriate modification</li> </ol> <p><b>Criteria to Advance to Next Phase:</b></p> <ol style="list-style-type: none"> <li>Discharge from acute care setting</li> </ol>

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<p><b>Phase III</b> Protected Motion &amp; Muscle Activation Phase</p> <p>Weeks 0-3</p> <p>Expected visits: 4-6</p>	<p><b>Specific Instructions:</b></p> <ul style="list-style-type: none"> <li>• Complete hip outcome tool (FOTO, LEFS, WOMAC, HOOS, JR)</li> <li>• Performance tests: 6MWT, 10MWT, TUG, 30-Second Chair Stand Test, Berg</li> </ul> <p><b>Suggested Treatments:</b></p> <p><b>ROM:</b> P/A/AAROM within hip precautions</p> <p><b>Manual Therapy:</b> soft tissue mobilization and lymph drainage as indicated</p> <p><b>Stretching:</b> passively including hip flexor to neutral (Thomas test position) or prone lie, quads, hamstrings, adductors and calf</p> <p><b>Modalities:</b> Edema-controlling treatments if appropriate</p> <p><b>Therapeutic Exercise:</b></p> <ul style="list-style-type: none"> <li>• NuStep/bike maintaining hip precautions</li> <li>• Supine exercises: quad/gluteal/hamstring/adductor sets, ankle pumps, assisted to active heel slides, short arc quad, bridging, hip abduction as indicated (surgeon-specific)</li> <li>• Sitting exercises including resisted LAQ and hamstring curl</li> <li>• Side-lying exercises including hip abduction and CLAM at 2-3 weeks as indicated (surgeon-specific)</li> <li>• Standing exercises: mini squats, marching, heel raises, calf raises, single limb stance, step-ups, lateral stepping, 3-way hip exercises (abduction (surgeon-specific), extension, flexion)</li> </ul> <p><b>Gait Training:</b></p> <ul style="list-style-type: none"> <li>• Reinforce normal gait mechanics – equal step length, equal stance time, heel-to-toe gait pattern, etc.</li> <li>• Use of appropriate assistive device independently with no to minimal Trendelenburg and/or antalgic pattern</li> </ul>	<p><b>Goals of Phase:</b></p> <ol style="list-style-type: none"> <li>1. Provide environment for proper healing of incision site</li> <li>2. Prevention of post-operative complications</li> <li>3. Improve functional hip strength and ROM within precautions/dislocation parameters</li> <li>4. Minimize pain and swelling with use of cryotherapy/modalities as needed</li> <li>5. Normalize gait with appropriate assistive device</li> </ol> <p><b>Criteria to Advance to Next Phase:</b></p> <ol style="list-style-type: none"> <li>1. Controlled pain and swelling</li> <li>2. Safe ambulation with assistive device and no to minimal Trendelenburg and/or antalgic gait pattern.</li> <li>3. Adequate hip abductor strength of at least 3+/5 (surgeon-specific)</li> </ol>
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<p><b>Phase IV</b>  <i>Motion &amp; Strengthening Phase</i></p> <p>Weeks 6-10</p> <p>Expected visits: 6-10</p> <p>Total visits: 10-16</p>	<p><b>Specific Instructions:</b></p> <ul style="list-style-type: none"> <li>• Continue with previous exercise program</li> <li>• Complete 6-minute walk test or stair climbing test if appropriate</li> <li>• Driving per physician's orders (good limb control and off pain meds)</li> </ul> <p><b>Suggested Treatments:</b>  <b>ROM:</b> P/AROM to patient tolerance and within hip precautions  <b>Manual Therapy:</b> Passive stretching and soft tissue mobilization (including scar mobilization) as needed  <b>Stretching:</b> Continue as above  <b>Modalities:</b> Edema-controlling treatments if appropriate  <b>Therapeutic exercise:</b></p> <ul style="list-style-type: none"> <li>• NuStep/upright bike</li> <li>• Progression of the above exercises</li> <li>• Addition of resistance bands and weights</li> <li>• Weight machines: Leg press, leg extension, hamstring curl, multi-hip machine within precautions</li> <li>• Closed chain strengthening exercises including 1/4 to 1/2 depth forward lunge, sit-to-stand chair/bench squats, 1/4 to 1/2 wall squats/sits, resisted forward and lateral walking</li> <li>• Static and dynamic balance/proprioceptive activities as appropriate: BAPS, Biodex Balance System SD, Airex, DynaDisc, BOSU</li> <li>• Aquatic exercises as needed if incision is completely healed</li> </ul> <p><b>Gait training:</b></p> <ul style="list-style-type: none"> <li>• Reinforce normal gait mechanics – equal step length, equal stance time, heel-to-toe gait pattern, etc.</li> <li>• Ambulation on uneven surfaces</li> <li>• Negotiation of stairs with reciprocal gait pattern without compensation</li> <li>• Progression to assistive device-free gait without Trendelenburg and/or antalgic pattern as appropriate</li> </ul>	<p><b>Goals of Phase:</b></p> <ol style="list-style-type: none"> <li>1. Progress full functional ROM within hip precautions</li> <li>2. Improve gait and stair use without AD as able</li> <li>3. Incision mobility and complete resolution of edema</li> <li>4. Advance strengthening including functional closed chain exercises and balance/proprioceptive activities</li> </ol> <p><b>Criteria to Advance to Next Phase:</b></p> <ol style="list-style-type: none"> <li>1. Adequate hip abductor strength to 4-/5</li> <li>2. Ambulate without AD safely</li> </ol>
<p><b>Phase V</b>  <i>Advanced Strengthening &amp; Functional Mobility Stage</i></p> <p>Weeks 10+</p> <p>Expected visits: 2-4</p> <p>Total visits: 12-20</p>	<p><b>Specific Instructions:</b></p> <ul style="list-style-type: none"> <li>• Continue previous hip strengthening exercises</li> <li>• Complete FOTO, LEFS, WOMAC, or HOOS, JR at time of discharge</li> </ul> <p><b>Suggested Treatments:</b>  <b>ROM:</b> P/AROM to patient tolerance within hip precautions  <b>Therapeutic exercise:</b></p> <ul style="list-style-type: none"> <li>• Progression of the above exercises</li> <li>• Endurance exercise including gait, elliptical and stair stepper</li> <li>• Sport-specific activities in preparation for return to physician-approved recreational sport</li> <li>• Advanced long-term HEP instruction</li> </ul> <p><b>Gait training:</b> Normalized gait on even and uneven surfaces</p>	<p><b>Goals of Phase:</b></p> <ol style="list-style-type: none"> <li>1. Improve hip muscle strength to 4+/5 to 5/5 and endurance</li> <li>2. Normalized gait on even and uneven surfaces</li> <li>3. Return to work/recreational activities as physician approved</li> <li>4. Independent with advanced HEP</li> <li>5. Understanding of avoidance of lifelong restrictions to include high-impact activities such as running, jumping, kicking and heavy manual labor</li> </ol>

**REFERENCES:**

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