

Outpatient Rehabilitation Guidelines for Traditional (Metal on Polyethylene) Total Hip Arthroplasty

These rehabilitation guidelines are presented in a criterion based progression. General time frames are given for reference to the average, but patients will progress at different rates depending on their age, comorbidities, pre-surgical Range of Motion (ROM), strength and health/functional status, rehabilitation compliance, learning barriers and complications. Specific time frames, restrictions and precautions are given to protect healing tissues and the surgical reconstruction. Attention is given to other musculoskeletal issues at joints above or below the replaced joint that can influence the outcome of the total hip arthroplasty (THA). The full rehabilitation program may not be necessary and depends on the patient's goals and desired activities.

Basic Principles for the Patient and Therapist

1. These guidelines describe prioritized rehabilitation following traditional (metal on polyethylene) THA.
2. Post-operative recovery begins with a pre-operative evaluation, training and educational visit at the hospital. This is now known as the Joints 101 class. Patients learn an initial post-operative set of exercises, including

isometric and active range of motion exercises. Patients also learn how to walk with crutches, or a front wheeled walker, in order to facilitate a faster return to normal walking, as well as allowing practice within the home environment to expedite safe return, and allay fears associated with this.

3. Patients follow traditional THA dislocation precautions indefinitely. These precautions are in effect for 6 weeks post-surgery for all patients from all surgeons.

Precautions include:

- Patients should not cross the thighs or knees at any time. When sitting, feet can be crossed, but not the thighs or knees.
- Patients should not flex hip more than 90 degrees at any time. The knee should never be higher than the hip while sitting. Bending forward at the waist in standing or sitting should also not exceed 90 degrees.
- Patients should not let the hip or thigh turn inward. Toes can be pointed inward, as long as the thigh and

kneecap are facing straight ahead or slightly rolled out.

- Standing on the affected side and turning the body toward the affected side is IR at the hip, must be avoided in the first 6 weeks.
 - Patients should avoid heavy lifting (no more than 30-50 pounds). After the first 6 weeks occasional lifting is allowed.
 - After 6 weeks, patients may be allowed to exceed 90 degrees of relative hip flexion by reaching between the knees while sitting, in order to don socks. Flexion with combined ER at and slightly above 90 degrees may also be allowed, again for the sole purpose of easing donning of shoes and socks.
4. Return to Sports: Your surgeon will determine feasibility of return to sport with traditional THA rehabilitation. Patients should discuss this with their surgeon and physical therapist early in rehabilitation, as there are some higher level activities that can be done.

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PHASE I (surgery to about 3-6 weeks after surgery)

Appointments	<ul style="list-style-type: none"> • Physician appointment and suture removal within 2 weeks after surgery • Rehabilitation begins 7-10 days after hospital discharge, 1-2 times every week thereafter
Rehabilitation Goals and Priorities	<ul style="list-style-type: none"> • Protection of the post-surgical hip through weight bearing as tolerated and education on avoiding beyond patient limits with range of motion exercises. Restore hip range of motion within the precautions (Flexion <90°, no internal rotation or adduction past midline). • Normalize gait with assistive device. Dependent upon previous functional level before THA, as well as patient progress post THA, between post-operative weeks 3 and 6 most patients should be able to transition to 1 crutch or use of cane and begin walking short distances without assistive device. This needs to be useful, functional gait, not antalgic trendelenburg. • Restore leg control: Patients should be able to perform repeated standing hip abduction on the affected side, and demonstrate fluent movement patterns while considering dislocation precautions
Precautions	<ul style="list-style-type: none"> • Use assistive device(s) for normal gait, weight bearing as tolerated (WBAT) • Maintain traditional THA precautions (no hip flexion greater than 90°, no hip IR or adduction past midline) • Range of motion should be regained mostly through active/active assistive movement exercises (within precautions). Passive forced stretching and joint mobilizations should be avoided secondary to potential for hip dislocation/subluxation
ROM Exercises	<ul style="list-style-type: none"> • Active assisted range of motion (AAROM) and gentle Passive range of motion (PROM) of hip in all planes, within the range of motion restrictions
Suggested Therapeutic Exercise/Treatment	<ul style="list-style-type: none"> • Gait activities (marching, heel-toe rocking, sidestepping) – may utilize pool for gait activities once the suture sites are healed without drainage or scab (4 weeks post-operatively at earliest, unless otherwise indicated by the surgeon). Aquatic exercise/pool should be strongly considered if trendelenburg is not improved by the 6 week mark. • Isometric hip flexion, extension, abduction, adduction, internal rotation and external rotation • Weight shifting – progressing to balance exercises • Hip abduction, adduction, flexion, and extension active range of motion (AROM) without resistance. (With reduction in substitution patterns) • Begin with short arc movements and progress to full arc • Begin in gravity minimized positions and progress to anti-gravity positions (i.e. abduction in side lying) • Address objective deficits in joints above and below, address mechanics of related areas (spine, knee, ankle as needed)
Cardiovascular	<ul style="list-style-type: none"> • Upper body circuit training or upper body ergometer (UBE) if patient desires
Progression Criteria	<ul style="list-style-type: none"> • Achievement of goals above

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PHASE II (begin after meeting Phase I criteria, usually 6-8 weeks after surgery)

Appointments	<ul style="list-style-type: none"> • Physician appointment at 6 weeks after surgery • Rehabilitation appointment based on patient progress, 1-2 times every week
Rehabilitation Goals and Priorities	<ul style="list-style-type: none"> • Regain muscular strength (focus on abduction) • Progress off assistive device for all surfaces and distances, demonstrating normal gait pattern • Single leg stance control • Good control and no pain with functional movements, including step up/down, sit to stand squat • Functional progress with donning socks and Lower extremity (LE) garments
Precautions	<ul style="list-style-type: none"> • Discontinue (D/C) crutch/cane when gait is normal and pain free. Do not encourage discontinuing device if pain or Trendelenburg remains • Post-activity soreness should resolve within 24 hours • Continue to maintain traditional THA precautions <ul style="list-style-type: none"> ◦ Patients should regain full (allowed) functional AROM through active movements at controlled speeds. Avoid passive/forced movements ◦ Begin with single plane, non-weight bearing movements ◦ Avoid multi-planar weight bearing movements within the ROM restrictions until patient demonstrates good control with single plane movements
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> • Stationary bike (10-20 minutes) • Transfer training to and from the ground • ROM exercises to assist donning socks and LE garments • Gait and functional movement drills • Non-impact LE and core strengthening • Non-impact balance and proprioception training • Hip AROM with progression of resistance • Progressive hip abduction strengthening is the focus of this phase <ul style="list-style-type: none"> ◦ Standing/side-lying abduction exercises ◦ Functional closed chain abduction strengthening ◦ Aquatic pool exercises if trendelenburg persists
Cardiovascular Exercise	<ul style="list-style-type: none"> • Non-impact endurance training; stationary bike, Nordic track, flutter kick with kickboard, deep water run, elliptical trainer
Progression Criteria	<ul style="list-style-type: none"> • Achievement of goals above

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PHASE III (begin after meeting Phase II criteria, usually 9-12 weeks after surgery)

Appointments	<ul style="list-style-type: none"> • Physician appointment 3-6 months after surgery, depending on patients progress • Rehabilitation appointment based on patient progress and personal goals, 1 time every 1-3 weeks
Rehabilitation Goals and Priorities	<ul style="list-style-type: none"> • Improve muscular strength and endurance • Good control and no pain with all activities of daily living (ADL) as well as work specific movements. • Able to walk longer distances (1 mile) without a limp
Precautions	<ul style="list-style-type: none"> • Post-activity soreness should resolve within 24 hours • No impact activities
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> • Strength and balance exercises with progression from double leg to single leg and 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 • Progression of hip and core strengthening • Continue ROM/stretching towards (and potentially above) 90 degrees flexion with ER for those patients who are allowed to exceed this for shoe and sock donning
Cardiovascular Exercise	<ul style="list-style-type: none"> • Replicate work specific energy demands (non-impact)
Return to non-impact sport/work criteria	<ul style="list-style-type: none"> • Achievement of goals above.

These rehabilitation guidelines were developed by The Specialty Team for Arthroplasty Rehabilitation (STAR) Team in conjunction with the UW Health Joint Replacement Surgeons.

For questions regarding these rehabilitation guidelines, call (608) 263-8060 or email shill2@uwhealth.org. For questions regarding specifics of your surgery, please call your surgeon's office.

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