

This protocol has been developed using a combination of the most current research and clinical experience with SuperPATH hip replacements performed by Dr. Jimmy Chow and adopted by Dr. Jeremy Oryhon.

Phase I: Early ROM and Open Chained Strengthening Time frame: 1-2 weeks

Manual Therapy:

- Adductor strumming soft tissue mobilization technique.
- Lateral grade I-II mobilization of the femur, progress by adding passive hip ER to end range. Hip in most comfortable position of flexion from 60-90.
- Inferior grade II-III mobilization of the femur, progress by adding passive hip flexion to end range.
- PROM into hip abduction (supine adductor stretch) while stabilizing contralateral LE.
- Supine iliopsoas stretch; knee extended, apply manual force to posteriorly tilt pelvis at ASIS and have patient hold contralateral LE in hip flexion.
- S/L quadratus lumborum stretch with contract/relax D1 and D2 pelvic patterns.

Therapeutic Exercise:

- S/L clams in 30° and 60° of hip flexion. (Try the most comfortable position of flexion to start with this exercise)
- Active hip horizontal abduction with lateral mobilization of femur.
- S/L hip abduction with pillow between legs.
- Prone gluteus maximus press-ups with manual resistance.
- Active hip ER in sitting with contralateral UE reach to foot.
- Prone resisted hip IR and ER.
- Prone hip extension with and without knee flexion.
- Fire hydrants.
- Standing hip flexor and adductor stretch.

Goal for this phase:

- Increase ROM actively and passively to restore normal gait pattern and improve functional activities such as donning and doffing footwear.
- Strengthen gluteus medius and minimus which are frequently deficient after superPATH hip replacements.

- Begin to recruit gluteus maximus as a majority of patients will demonstrate impaired Gluteal activation.

<u>Phase II: Initial Closed Chained Strengthening and Gait</u> <u>Training. Time frame: 3-4</u>

Manual Therapy:

- Same as phase I, focus on restoring hip extension and ER.
- Progress supine iliopsoas stretch to S/L.
- Add Psoas release techniques if necessary.
- Seated erector spinae stretch with manual stabilization of pelvis.(to prevent anterior tilt)

Therapeutic Exercise:

- Gait training (elevating ipsilateral arm or holding ~15lb dumbbell by side on ipsilateral side will improve abductor lurch gait commonly seen s/p superPATH hip replacement).
- Partial squats progressing to full squats.
- Single leg stance with UE support
- Bridging with TB for hip abduction.
- Supine marching with abdominal hollowing.

Goals for this Phase:

- Begin closed-chained hip strengthening cautiously to avoid greater trochanteric pain.
- Begin to normalize gait, emphasizing an efficient and symmetrical gait pattern.

<u>Phase III: Intermediate to Advanced Closed Chained</u> <u>Strengthening and Return to Activity.</u> <u>Time Frame: 4-6 weeks</u>

Manual Therapy:

- Pt should have a functionally sufficient ROM at this time, emphasize home stretching program for any continued discrepancies in ROM with contralateral side.

Some superPATH patients will complain of continued soft tissue restriction in the periincisional area. This is often a restriction in the superior capsule which responds well to soft tissue mobilization (avoid foam rollers).

Therapeutic Exercise:

- Bridging with marching progressing to single Leg Bridge.
- Single leg stance on unstable surface.
- Standing isometric hip abduction and ER at wall with hip at 90° of flexion.
- Plank with hip extension.
- Single leg dead lift with dumbbell.
- Isometric squats with TB around knees and unilateral hip ER with accompanying trunk rotation in the same direction.

Goals for this Phase:

- Provide dynamic exercises that utilize multiple muscle groups and will help maintain hip strength and ROM.
- The more advanced exercises are often given as a HEP progression if appropriate (typically given to younger and more active patients).

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