Basin Orthopedic Surgical Specialists

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Hip Resurfacing Protocol

Pre-op Physical Therapy

- Patient may be referred for 1-2 pre-op PT visits for instruction in gait with appropriate assistive device, and post-op rehab exercises

Phase I – Immediate post-operative phase

Goals:

- Educate the patient on precautions and restrictions to protect the repair
- Decrease pain and inflammation
- Stimulate muscle function/contraction of various hip/LE muscles within precaution parameters
- Attain PROM – up to 90 degrees hip flexion by 1-2 weeks
- Increase knee flexion ROM to WNL by 1-2 weeks
- Teach proper gait with crutches or walker
- Improve neuromuscular control

Assistive Device/Weight Bearing

- Pt should be educated in proper gait with either two crutches, standard walker or wheeled walker. Appropriate device will be based on patient comfort, strength, and safety.
- Weight bearing as tolerated unless otherwise specified by physician

Precautions:

- Dr. Chaudhary has no precautions for his hip resurfacing unless otherwise specified by MD

Week 1 (1-7 days)

- Ankle pumps throughout the day to prevent DVT and improve circulation to LE
- Gait with 2 crutches or walker with WBAT unless otherwise instructed per MD
- Assess patellar mobility and perform mobilization in all directions if needed.
- Heelslides – may assist with towel or other leg if needed as long as hip stays in neutral alignment
- Quad sets – may use functional e-stim (Russian) on quads as needed
- Gluteal sets
- Adductor set with ball between legs
- Supine marching with knee flexed
- Supine active hip abduction/adduction to midline (assist as needed).
- Ice-Stim for pain control (pre-mod) and swelling (HVG) control as needed

Home Health PT vs. Outpatient Physical Therapy

- Patient's are generally in the hospital for 3 days and they will receive IP Physical Therapy while in the hospital
- Patient's that are elderly or deconditioned will generally go home and receive home health physical therapy or they may need to go to a skilled nursing facility for a few weeks. Once patient's are more ambulatory, they can begin OP physical therapy generally around 2 weeks post-op
- Patient's who are younger and in fairly good condition, can generally begin OP physical therapy at 4-7 days post-op

Driving

- Patient's with a hip resurfacing are generally allowed to begin driving at 1-2 weeks post-op as long as they are not currently taking pain medication when driving

Days 4-7:

- Short Arc Quads -begin with no resistance and then progress to ankle weights as tolerated
- Begin active straight leg raise for hip flexion to 30 degrees as pain and strength allow and assist as needed
- Long Arc Quads (seated knee extension) keeping hip in appropriate position for precautions. Begin with no resistance and then progress to ankle weights as tolerated
- Multi-angle quadriceps isometrics foot on floor (30 °, 45 °, 60°)
- Standing weight shifts forward and sideways – progress to knee bend with weight shift
- Standing closed chain terminal knee extension with light band above knee

Goals:

- Thorough education of patient for their specific precautions if applicable, monitoring positions with ADL's for home and ice for pain relief.
- Patient Independent with appropriate transfers to and from bed and chair per their specific precautions.
- PROM hip flex = 90 degrees

Week 2 (8-14 days)

- Gait with 1-2 crutches or walker.
- Gait in therapy—practice correct form: knee flexion in swing, terminal knee extension, weight shift in stance. If patient is ambulating with a trendelenburg, practice weight shifts with tactile cues to improve alignment in stance.
- Standing mini squats holding on to walker or balance bar for support
- March in place holding on to walker or balance bar
- Bike – for ROM
- Standing gastroc stretch on slantboard.
- Cones – to increase flexion, and practice balance with 1 or 2 crutches (based on tolerance)
- Hamstring curls holding on to walker/crutches – pt may be allowed to flex hip with ant approach.
- Standing active hip flexion to 30 degrees, hip abduction and hip extension if posterior approach was performed.
- Calf raises—bilateral

Week 3 (15-21 days)

- Patient's with hip resurfacing generally have tight anterior hip capsular before surgery, therefore patient can begin a gentle figure 4 anterior hip capsular stretch in supine or sitting with hip abducted/flexed and externally rotated to comfort.
- Initiate walking program with normal pattern with 1 crutch or cane – may need to start in home and still use walker/ 2 crutches for community distances if Trendelenberg worse with fatigue
- Sidestepping and retro walking if hip precautions allow.
- Standing resisted hip flexion to 30 degrees, hip abduction and hip extension if posterior approach was performed. Progress as tolerated.
- SAQ (add resistance in 1# increments and progress as tolerated)
- FAQ's (add resistance in 1# increments and progress as tolerated)
- Minisquat holding on to chair or walker – hold 2-3 seconds at 30° flexion
- One leg balance on flat surface as tolerated-May begin holding on to object and progress to unsupported as tolerated
- Increase balance work: unilateral stance eyes open, unilateral stance on airex, minimize Trendelenberg. Verbal cues and mirror for reinforcement.
- Pool program (as long as wound us fully closed with no scab and no drainage): walk forward, backward, sideways, straight leg raise 4 ways, minisquats, stretching, unilateral stance balancing, knee bends (if incision closed)
- Cones: forward, lateral, backward. Change speeds. Land and balance with slightly flexed knee. All three directions only allowed per precautions.
- Scar and soft tissue massage as needed

Goals:

- AROM hip flex 90 degrees
- Ambulate with appropriate assistive device with little to no deviations.
- Continue with education on precautions

Weeks 4-5

- Begin active sidelying hip abduction with knee flexed and progress to hip abduction with knee extended as tolerated. Keep pillow between knees to avoid hip adduction past midline.
- Leg Press: using bilateral LE – (40° to extension without locking) Use low weight (10-50% maximum of patients body weight. Add weight only if good control in terminal extension) if can accommodate precautions.
- Progress ambulation and wean patient off assistive device as tolerated if negative Trendeleberg
- Progress to walking on treadmill or on level surfaces as tolerated if negative Trendelenberg
- Step up – forward and lateral – start with 2 inch box and progress in 1-2" increments as tolerated. Progress step up exercises – do not allow knee to twist or knees to pass toes
- Progress to cable column 3 way hip (flex to 90, abd, ext) if patient tolerates without any pain or difficulty. (Patient needs to be able to lift at least 3 pounds on SLR to progress to cable column)
- Wall squats – make sure knee does not twist or pass toes (begin 0-30, progress to 0-45 and then eventually 0-60 degrees as long as no complains of knee or patellofemoral pain

Goals

- ROM 0-115
- Gait with negative Trendelenberg and no other deviations without assistive device.

Intermediate Phase: Weeks 6 –9

Goals

- Normalize gait all surfaces
- Increase strength entire lower extremity: focus on quad, hamstring, gastroc/soleus, gluteus medius and hip ext rotation for correct hip and knee positioning and stability
- Correct posture and control during exercise: knee not passing toes, no valgus at knee (no knee twisting/hip IR), no locking of knee during exercise
- Increase neuromuscular control/balance/proprioception at a variety of hip/knee angles (functional for sport)

Week 6-9

- Step downs as tolerable
- Leg extension machine if pt able to do 5# or greater with FAQ and no patellofemoral pain-start bilateral and progress to unilateral as tolerated-begin with light resistance and progress as tolerated
- Increase endurance with walking and stair climbing as tolerated
- Active and younger patients may be progressed to elliptical machine as tolerated

No impact loading for 1 year post-op