

Ganz Osteotomy Protocol

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A Ganz procedure is an osteotomy of the pelvis where the acetabulum is cut free from the pelvis and is rotated over the femoral head to improve the femoral head coverage and treat dysplasia. It is always combined with a hip arthroscopy to treat the labral tear and the CAM deformity. The Ganz is done on either the day of the hip arthroscopy or 4-6 weeks after the arthroscopy (staged procedure). The initial phase of rehabilitation varies depending on this.

In general, if the hip arthroscopy is done first, then the early goal is to gain back motion in the hip and begin activating the gluteus musculature. Staging the two procedures allows early joint inflammation to recede and motion to improve before the Ganz is performed. If the scope and Ganz are done the same day the biggest risk is stiffness. The rehab goal with the combined procedure is to get the joint moving while respecting the initial motion precautions for the arthroscopic portion of the procedure.

The intent of this protocol is to provide guidelines for progression of rehabilitation, it is not intended to serve as a substitute for clinical decision making. Progression through each phase of rehabilitation is based on clinical criteria; there will be variability between patients in terms of time frames and it is crucial not to progress through phases until the individual is ready and has met clinical criteria.

Initial Precautions

Straight leg raises are **NOT** a good exercise for the hip and should **NOT** be a part of your rehab protocol.

Weight Bearing:

- 20% Foot Flat Weight Bearing for 6 weeks following the Ganz Osteotomy to keep excessive load off of the hip and protect healing structures

Initial ROM Related Restrictions for 2 weeks following the *arthroscopy portion of the surgery with a staged procedure*:

- External Rotation to 0° for 2 weeks
- Extension to 0° for 2 weeks
- CPM for 4-6 hours per day for 2 weeks
- Spend 2 hours per day on stomach to allow for mild stretching of the hip flexors
- Avoid impinging with flexion and internal rotation ROM exercises

This protocol was provided by Proaxis Therapy
(303) 295-1403 www.proaxistherapy.com

- *There are no ROM related restrictions following the Ganz portion of the staged procedure

Initial ROM Related Restrictions when the *Ganz and Hip Arthroscopy* are performed on the same day:

- External rotation to 0 ° for 2 weeks
- CPM for 4-6 hours per day for 3 weeks
- Extension to 0 ° for 2 weeks

Phase 1 – Protection Phase (post-op weeks 1-6)

Pain and Swelling

- PRICE – Protection, Rest, Ice, Compression, Elevation
 - Ice a minimum 5-6 times per day for 20-30 minute sessions
 - There is no maximum!
 - Icing is encouraged to be done in prone
 - Ankle Pumps for swelling and DVT prevention

Range of Motion

- Passive Range of Motion
 - Partner assisted ROM recommended 2 times per day, 10 minutes total each episode divided between the following 3 motions
 - 1.) Circumduction to be done at 30° of hip flexion in addition to
 - 2.) Abduction
 - 3.) Internal rotation with the hip in neutral (log rolls)
 - Circumduction to be done at 70° of hip flexion by PT only
- Active/Active Assistive Range of Motion
 - Stationary bike without resistance 20 minutes per day starting week 3 based on comfort
 - No recumbent biking to avoid hip flexor contractures
 - Quadruped rocking and cat/camel for hip flexor stretching starting week 2

*****Always avoid terminal hip flexion that results in pinching*****

Aquatic Therapy

- Begin in week 5 post-operatively once the incisions are healed
- Motor control and ROM exercises
 - Circumduction, Hip abduction

- Forwards and Backwards gait with emphasis on full hip extension and an upright trunk
- Begin walking in water at shoulder level

Strength/Motor Control

- Isometrics starting post-operative week 1
 - Quad sets, Glut sets, Transverse abdominus isometrics
- Standing abduction with internal rotation for gluteus medius week 3
- Hamstring curls with the swiss ball for initial psoas activation avoiding adductor compensation (Week 5)
- Tall kneeling with controlled rotation (Week 5-6)

Proprioception and Neuromuscular Re-education

- Prone IR/ER rhythmic stabilization exercises
- Quadruped lumbopelvic stabilization exercises
- ½ kneeling for stability prior to full weight bearing (Week 5-6)

Gait

- Crutches with FFWB are indicated for the first 6 weeks to protect healing structures. This will also help to reduce swelling and pain
- Weaning from crutches
 - Begin with tall kneeling and standing weight shifting exercises
 - Progress weight on two crutches gradually
 - This transition may take another 1-2 weeks; do not progress through pain
- Focus on gait exercises to promote normalized hip extension and lumbar stabilization with gluteus medius activation

Phase 2 – Initial Strengthening (post-op weeks 7-12)

Criteria for advancement to Phase 2:

- Pain-free PROM equal to 80% of the contralateral limb
- Able to maintain full bridge position without compensations
- Minimal deviations in gait with no discomfort
 - ****Do not progress if the patient demonstrates trendelenberg gait, does not have equal hip extension at terminal stance, or cannot actively advance the leg during swing phase pain-free****
- Maintain stable tall kneeling position without anterior hip discomfort

*****Never progress exercises if patient is having anterior hip pain or groin pain*****

Goals:

- Full active and passive ROM including pain-free standing hip flexion
- Rotary stability including side and front planks without compensations or pain
- Normalize gait
- Increase leg strength to allow for:
 - Walking 1 mile
 - Stair ascending/descending
 - Single leg bridge
 - Double knee bends without compensations
 - Single knee bend to 70° without compensations

Strength, Proprioception and Neuromuscular Re-education

- Closed chain single and double leg strength and stability exercises at therapists discretion such as reverse lunge with glider

Cardio

- Bike or spinning gradually increasing resistance at week 8; limit to a maximum of level 5 for the following 2 weeks with 30 minutes total time; then continue to progress gradually if there is no increased hip pain
- Elliptical trainer beginning at week 12 (Limit trainer time to 20 minutes the first 1-2 weeks in order to ensure no increased hip pain)
- Swimming without leg kick (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 (post-op weeks 12- Sport Specific Training)

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 compensations
- Single knee bends to 70° flexion without compensations
- Rotary stability and ability to hold plank

Goals:

- Restore multi-directional strength and agility
- Restore ability to absorb impact on leg (plyometric strength)
- Full active hip extension control for normal running mechanics

Prioprioception/Agility:

- Progress single leg strengthening including bosu proprioceptive training and added time to single leg knee bends
- Reinforce posterior chain strength and endurance
- Initiate light agility including lateral agility

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

Phase 4 – Return to Sport

Criteria for advancement to Phase 4

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

Perform sport specific strength training and drills until patient begins team training progression

*Also, closed chain pilates is recommended for hip maintenance and can be very helpful in the final phase of P.T to maintain posterior chain strength. *