ORTHOPEDICS & SPORTS MEDICINE
BAYCARE CLINIC®

Dr. Awowale's Hip Arthroscopy

General Guidelines:

- Despite the minimally invasive nature of the hip arthroscopy, significant work was performed inside the hip joint. Time is required for the repaired structures to heal.
- Systematic approach to rehabilitation (generally under the guidance of a physical therapist) is critical to ensuring an optimal outcome.
- Each patient's recovery is highly individual and use of the therapy protocol should be customized to the patient.

Rehabilitation:

- Patient should meet with the physical therapist prior to the surgery for a functional assessment and to review the protocol
- Formal physical therapy should start within 1 to 3 days after surgery
- Progression through therapy phases is based on healing times, pain, and function dependent and is not exclusively time dependent.
- Pushing the rehabilitation too quickly may aggravate the hip and delay recovery.

Precautions:

- Crutches and partial weight bearing to protect the repair are based on each specific procedure. Refer to specific instructions from Dr. Awowale regarding weight bearing restrictions.
- Avoid excessive external rotation and flexion which stresses the repair.
- Avoid early active hip flexion that can lead to hip flexor tendonitis.
- Avoid advancing too rapidly through the therapy protocol to prevent flare-ups.
- No driving until permission from the surgeon (usually around 4 weeks).
- Medications help reduce risk of abnormal bone formation (heterotopic ossification) and blood clot (deep venous thrombosis).

Phase 1- Early Protective Phase – Weeks 0 - 3

Goals for phase 1

- Recover from surgery
- Protect repair
- Reduce post-operative pain, swelling, and inflammation
- Crutch training to unload hip, while normalizing gait
- Prevent muscular inhibition
- Encourage mobility
- Promote wound healing (sutures out in 10 to 14 days)

Criteria for progression to Phase 2

- Minimal pain with phase I exercises
- Minimal limitations in range of motion (90 degrees of hip flexion with minimal pain)
- Normalized heel to toe gait with two crutches and partial weight-bearing

Weight bearing and Gait training

- Protected weight-bearing (50% of body weight)
  - Use two crutches to limit weight, while stepping on the operative leg
  - Maintain foot flat on the ground (reduces force in the hip joint)

PROM

- Hip PROM within post-op restrictions
  - No external rotation > neutral
  - No hip flexion > 90 degrees
  - Other precautions depend on the procedure performed

AAROM

- Standard stationary bike
  - High seat to prevent hip flexion > 90 degrees
  - No resistance

AROM

- Standing exercises (keep knee straight)
  - Hip abduction and adduction without resistance
  - Hip flexion and extension without resistance

Manual Therapy

- Grades I-II hip joint mobilizations as needed
- Hip Circumduction mobilization – grade I-II
- Scar mobilization as needed

Strengthening

- Hip isometrics (glutes; abductor and adductor)
- Quads and hamstrings sets
- Active-assisted heel slides
- Pelvic tilts
- Double legged supine bridge
- Seated knee extension
- Prone knee flexion
- Standing double heel raises (keep knee straight)

Modalities

- Modalities to reduce swelling and inflammation

Phase 2 - Initial Strengthening – Weeks 4 to 6

Goals for phase 2

- Protect repair
- Increase range of motion
- Transition from crutches
- Normalize gait
- Progressively increase muscle strength

Criteria for progression to Phase 3

- Minimal pain with phase II exercises
- 105 degrees of hip flexion and 20 degrees of external rotation with minimal pain
- Pain free/normal gait pattern
- Hip flexion strength > 60% of the opposite side
- Hip abduction/adduction strength and internal/external rotation strength > 70% of the opposite side

Weight bearing and Gait training

- Transition from crutches
  - Start with single crutch on the opposite side from the surgery to unload the operative hip during gait
  - May transition to no crutches, once comfortable and no significant gait deviations
  - May continue to need crutches, when planning to walk a distance or being on the feet for a longer time.

AROM

- Progress with hip range of motion
  - No external rotation > 20 degrees
  - No hip flexion > 105 degrees
  - Prone hip rotations

Manual Therapy

- Continue Grades I-II hip joint mobilizations
- Avoid long axis distraction of the hip
- Hip Circumduction mobilization – grade I-II
- Soft tissue massage at the portal sites
- Deep tissue mobilization as needed
- Pelvic and lumbar spine joint mobilizations as needed
- Desensitize irritable nerve distributions as needed

Strengthening

- Progress core strengthening
- Hip strengthening
  - Hip flexor activation (careful with active/resisted hip flexion to prevent inflammation)
  - Clamshells
  - Single leg bridges
  - Leg press (minimal resistance)
  - Weight-shifting
  - ¼ mini squats
  - Quadruped superman
  - Standing exercises: Abduction and adduction with low resistance; Flexion and extension with low resistance
  - Standard stationary bike: Increase duration and resistance as tolerated

Aquatics

- Pool therapy is recommended after the portals are healed

Modalities

- Utilize cryotherapy modalities as needed

Phase 3 - Strengthening - Weeks 7 to 10

Goals for phase 3

- Protect repair
- Normalize motion and strength
- Normalize gait
- Improve endurance and conditioning
- Improve neuromuscular control, balance, and proprioception

Criteria for progression to Phase 4

- Symmetrical range of motion
- Hip flexion strength > 70% of the opposite side
- Hip abduction/adduction and internal/external rotation strength > 80% of the opposite side
- Cardiovascular fitness returning to pre-operative level

AROM

- Normalize hip range of motion
  - No restrictions
  - Symmetry with unaffected side

Manual Therapy

- Stiffness dominant hip joint mobilizations (grades III-IV) as needed
- Soft tissue massage at the portal sites as needed
- Deep tissue mobilization as needed

Strengthening

- Increase resistance with active exercises
- Clamshells with theraband
- Side lying planks
- Physioball hamstrings
- Side-stepping with resistance
- Lunges

Neuromuscular

- Core stabilization
- Single leg balance
- Side steps over cups
- Step ups with eccentric lowering
- BOSU squats

Aquatics

- Continue pool therapy. Increase speed and duration. Decrease depth

Cardiovascular

- Standard stationary bike: Continue to increase duration and resistance; Lower seat to allow increasing hip flexion
- Elliptical machine with minimal resistance
- May use treadmill walking program

Modalities

- Utilize cryotherapy modalities as needed

Phase 4 - Strength and Plyometric Phase – Weeks 10 - 14

Goals for phase 4

- Normalize function
- Prepare return to activity
- Sports specific training

Manual Therapy

- As indicated

Strengthening

- Continue phase III exercises with progressive increase in intensity – Examples:
- Step-ups/downs
  - Progress to multi-directional stepping patterns
  - Progress stable to unstable surfaces
- Lunges
  - Progress to multi-directional lunging patterns
  - Progress stable to unstable surfaces
- SL squats
- SL RDL's
- Band walking
- Progression of glute bridging
- Continue with progressive increasing of resistance
- Continue with core strengthening exercises with progressive increase in intensity

Proprioception

- Advance proprioceptive training

Agility

- Sport specific agility drills

Advanced Gait Re-Training

- Initiate return-to-running progression
  - Utilize Alter-G treadmill or underwater treadmill if available

Plyometrics

- Start introducing low impact plyometrics

Cardiovascular

- Increase resistance and duration on bike and elliptical

Aquatics

- Pool running
- Swimming as tolerated

Phase 5 - Return to Function Phase – 4 – 6mo

Goals for Phase 5

- Minimize pain and inflammation
- Maintain full hip PROM and AROM
- Restore muscle strength and endurance
- Restore neuromuscular control
- Safe and effective return to previous level of function for sport or activity

Criteria for Return-to-Sport and Activity

- Full, pain free hip PROM and AROM
- Hip strength ≥ 90% of the uninvolved side
- Lower extremity strength, power, and endurance ≥ 90% of the uninvolved side
- Full speed sport-specific drills without pain or compensation
- Successful completion of return- to-sport testing
- Lower Extremity Functional Scale score ≥ 70/80

Stretching

- Continue stretching of all hip musculature

Manual Therapy

- Continue stiffness dominant hip joint mobilization (grade 3-4) as needed
- Continue other hip and lumbosacral manual therapy techniques as needed

Strengthening

- Continue Advancement of previous strengthening exercises

Neuromuscular Control

- Continue incorporate unstable surfaces and dynamic movement patterns with functional strengthening progression

Core Stabilization

- Continue incorporate core integrated exercises with functional strengthening progression

Advanced Gait Re-Training

- Progress return-to-running program
- Advanced agility and plyometric drills

Sport-Specific Training

- Initiate sport-specific training programs
    - Interval sport programs for running, cycling, swimming, skating, throwing, golfing, etc.
    - Traditional weightlifting exercises

Activity-Specific Training

- Prepare body for activity or job specific duties

Modalities

- Utilize cryotherapy, thermotherapy, and electrical modalities as needed

HEP

- Establish HEP for long-term self-management