SMOC
SPORTS MEDICINE AND ORTHOPAEDIC CENTER

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Rehabilitation Protocol*

Hip Arthroscopy

General guidelines:

- despite the minimally invasive nature of hip arthroscopy, significant work was performed inside the hip joint and time is required for the repaired structures to heal
- systematic approach to rehabilitation (generally under the guidance of a physical therapist with experience in hip rehab) is critical to ensuring optimal outcome
- physical therapy should start within 1 to 3 days after surgery
- each patient's recovery highly individual and therapy protocol should be customized to the patient
- progression through therapy phases is pain- and function-dependent, not time-dependent
- pushing the rehabilitation too quickly may aggravate the hip and delay recovery
- precautions:
    - crutches and partial weight-bearing to protect repair for 4 to 8 weeks depending on procedure
    - avoid excessive external rotation and flexion (stresses repair)
    - avoid early active hip flexion that can lead to hip flexor tendonitis
    - avoid advancing too rapidly through therapy protocol to prevent flare-ups
    - no driving until permission from surgeon (usually around 4 weeks)
    - medications help reduce risk of abnormal bone formation (heterotopic ossification) and blood clot (DVT or deep venous thrombosis)
- early post-operative goals include reducing post-operative pain, swelling and inflammation while avoiding stiffness and improving motion
- late post-operative goals include restoring motion and strength, normalizing gait, and conditioning
- ultimate goal is to return to prior or desired level of activity after eradicating the structural or mechanical problem responsible for symptoms
- the degree of hip damage may require careful consideration of modifying activities to reduce stress on the joint and prevent further problems

Phase I (weeks 0 to 3)

- goals:
    - 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

* adapted from University of New Mexico Sports Medicine

    - promote wound healing (sutures out 10 to 14 days)
- 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)
- hip joint mobilization
- manual therapy
- scar massage
- modalities to reduce swelling and inflammation
- hip passive range of motion within post-op restrictions
    - no external rotation > neutral
    - no hip flexion > 90 degrees
    - other precautions depend on the procedure performed
- muscle activation
    - hip isometrics (glut, quad, and hamstring sets, abductor and adductor isometrics)
    - heel slides (active-assisted range of motion)
    - pelvic tilts
    - double legged supine bridge
    - seated knee extension
    - prone knee flexion
- standing exercises (keep knee straight)
    - abduction and adduction without resistance
    - flexion and extension without resistance
    - double heel rises
- standard stationary bike with high seat (to prevent hip flexion >90) with no resistance
- criteria to progress to phase II
    - 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 weightbearing

Phase II (weeks 4 to 6)

- goals:
    - protect repair
    - increase range of motion
    - transition from crutches
    - normalize gait
    - progressively increase muscle strength
- transition from crutches at the 4 week mark
    - start with single crutch on opposite side from surgery, 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 be on your feet for a longer time
- progress with hip range of motion

    - no external rotation > 20 degrees
    - no hip flexion > 105 degrees
    - prone hip rotations
- manual therapy
    - massage portal sites
    - hip joint mobilizations
    - deep tissue mobilization
    - pelvic and lumbar spine joint mobilizations
    - desensitize irritable nerve distributions
- muscle activation
    - progress core strengthening
    - hip strengthening
        - hip flexor activation (careful with active / resisted hip flexion to prevent inflammation)
        - clam shells
        - single-leg bridges
        - leg presses (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
- pool therapy recommended after portals healed
    - decrease depth with each successive week (start at chest deep and progress to waist deep)
    - 4-direction walking
    - step-ups
- criteria to progress to phase III
    - minimal pain with phase II exercises
    - 105 degrees of hip flexion, 20 degrees of external rotation with minimal pain
    - pain free / normal gait pattern
    - hip flexion strength >60% of opposite side
    - hip abduction/adduction strength, internal/external rotation strength >70% opposite side

Phase III (weeks 7 to 10)

- goals:
    - protect repair
    - normalize motion and strength
    - normalize gait
    - improve endurance and conditioning

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    - improve neuromuscular control, balance, and proprioception
- normalize hip range of motion
    - no restrictions
    - symmetry with unaffected side
- manual therapy
    - massage portal sites
    - hip joint mobilizations
    - deep tissue mobilization
- hip strengthening
    - increase resistance with active exercises
    - clamshells with theraband
    - sidelying planks
    - physioball hamstring
    - side-stepping with resistance
    - lunges
- neuromuscular training
    - core stabilization
    - single leg balance
    - side steps over cups
    - step-ups with eccentric lowering
    - Bosu squats
- 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
- continue pool therapy, increase speed and duration, decrease depth
- criteria to progress to phase IV
    - symmetrical range of motion
    - hip flexion strength >70% of opposite side
    - hip abduction/adduction strength, internal/external rotation strength >80% opposite side
    - cardiovascular fitness returning to pre-operative level

Phase IV (weeks 11 to 14)

- goals:
    - normalize function
    - sports specific training
    - prepare return to activity
- continue phase III exercises with progressive increase in intensity
- manual therapy as indicated
- core strengthening
- advance proprioceptive training
- start introducing low-impact plyometrics

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- increase resistance and duration on bike and elliptical
- pool running
- swimming as tolerated
- sport-specific agility drills

Final phase (14 weeks & beyond)

- traditional weight-training
- increased intensity of plyometrics
- start running progression
- sport specific drills without pain
- cardiovascular fitness at or better than pre-operative level

Return to sports / activities

- full pain-free range of motion symmetrical to opposite side
- symmetrical hip strength
- stable pelvis
- ability to perform sport-specific drills at full speed without pain

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