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Hip Arthroscopy | Shoulder Arthroscopy | Sports Medicine

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Hip Arthroscopy Rehabilitation Protocol

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
- **You can use a recumbent exercise bike during the first 2 weeks after surgery. Use the non-operative leg to propel the bike slowly, with no resistance. The operative hip will gently cycle to avoid stiffness and scar tissue formation.**
- **Passive gentle hip circumduction should begin on the first or second day after surgery. This is performed by having an assistant/therapist gently move the hip in small circular motions with the patient lying flat on their back, the hip in a slightly (20-30 degrees) flexed position, and the assistant supporting the leg behind the knee and ankle. Avoid excessive external rotation of the hip (i.e. avoid turning the knee and foot outward). This routine is meant to begin early gently motion of the hip joint and avoid stiffness / excessive scar tissue formation.**
- Systematic approach to rehabilitation (generally under the guidance of a physical therapist with experience in hip rehab) is critical to ensuring optimal outcome
- Each patient's recovery is 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 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
 - 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 / Hip Circumduction and quadruped rocking.**
- 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
 - 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
- 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