

Chase D. Smith, MD

Precautions:

- WBAT/FWB with crutches for 4 weeks
- X-Act ROM Brace for 2-6 weeks(per physician recommendation)
- Protect against excessive forces onto hip joint
- Protect against torsional twisting forces
- Limit aggressive functional activities until 12 weeks or as advised by Physician

1. <u>Phase I – Immediate Postoperative Phase</u> Protective Phase (Day 1 to Week 6)

Goals: Gradually restore ROM & Flexibility
Diminish pain and inflammation
Restore muscular strength
Restore normal pain-free gait

Week 1:

- Crutches to control weight bearing forces (WBAT/FWB with crutches for 4 weeks)
- Perform knee to chest stretch (easy & pain-free- 5x hourly)
- Ankle pumps
- Gluteal sets
- Quad sets
- Hip adduction isometrics (pillow squeezes)
- Heel slides
- AAROM Hip, PROM Hip & Knee
- Pelvic tilts
- Double leg bridges
- Prone positioning Prone on elbows, prone knee flexion
- Stationary bike @ 3 days post-op
- Straight leg raises (flexion)
- Seated knee extensions
- UBE & upper body strengthening

Week 2:

- Stationary bicycle (high seat & minimal resistance) 10 min if tolerated
- Supine marching
- Isometric add/abduction
- Standing Hip abduction & adduction (no resistance)
- Ankle pumps
- Supine knee bent trunk rotations
- Joint mobilizations (Grades I & II)
- Pool walking (water up to axillia region) march steps, lateral steps, backward walking, mini-squats, heel raises

Week 3:

- Continue all exercises listed above
- Continue to perform AAROM & PROM exercises
- Hip flexion, IR/ER in pain-free range



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- ¼ mini squats, heel raises
- Single leg bridges
- Clam shells in pain free range
- Stiffness dominant hip mobilizations (oscillations grades III & IV)
- Straight leg raises abd, add, ext
- Kneeling hip flexor stretch
- Quadruped progression 4-point → 3-point → 2-point support
- Seated on stability ball (knee extensions, pelvic control exercises)
- Progress strengthening program (pain-free)
- Pool Program

II. Phase II – Intermediate Phase: Moderate Protection Phase (Weeks 4-6)

Goals: Restore full pain-free motion
Diminish pain and inflammation
Prevent muscular inhibition
Normalize gait

Criteria for progression to Phase II

- 1) minimal pain with phase 1 exercise
- 2) minimal ROM limitations
- 3) Normalized gait with one or two crutches

Weeks 4-5:

- Continue to progress isotonic strengthening program
- Continue all ROM, flexibility & stretching exercises
- Gradually increase time & resistance on stationary bicycle
- Gradually improve ROM through AAROM, PROM & stretching
- If hip develops stiffness initiate hip mobilizations (grades III & IV)
- Wean off crutches after 4 weeks
- Crunches
- Standing resisted flexion, adduction, abduction, extension (4-way hip)
- Leg press to 90 deg hip flexion with adductor activation
- Single leg balance
- Clamshells
- Pool flutter-kick, 4-way hip with water weights
- Forward and lateral cone walks with ball toss (5 weeks)
- Initiate elliptical (5 weeks)
- Abdominal exercises
- Progress pool exercises

Week 6:

- Continue all exercises above
- Single leg balance with perturbation
- Leg press
- Physioball hamstring



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- Supermans
- Knee extension, hamstring curls
- Manual or theraband PNF
- Sidestepping with sport cord
- BOSU squats

III. Phase III - Advanced Exercise Phase (Weeks 7-8)

Goals: Restore pain-free ROM

Initiate proprioception exercises

Progressively increase muscle strength and endurance

Criteria to enter Phase III:

- 1) Minimal pain with phase II exercise
- 2) Single leg stance with level pelvis

Weeks 7-8:

- Continue all stretching & flexibility exercises
- Full squats
- Single stability ball bridges
- Step-ups
- Lunges (single plane to triplanter with resistance)
- Cone walks forward and lateral with ball toss and sport cord
- Single leg body weight squats
- Step downs, step ups lateral
- Initiate tubing lifts with rotation w/ cable on 1 knee

IV. Phase IV - Return to Activity Phase (Weeks 9>)

Goals: Restoration of muscular endurance/strength
Restoration of cardiovascular endurance
Optimize neuromuscular control/balance/proprioception

Gradually increase demands on hip

Criteria to enter Phase IV:

- 1) Single leg mini squat with level pelvis
- 2) Cardiovascular fitness equal to pre-injury level
- 3) Demonstration of initial agility drills with proper body mechanics
- 4) No pain or tenderness with functional drills &/or activities

Weeks 9-11:

- Continue all exercises listed in previous phase
- Pool running → Treadmill (walk/run intervals)
- Functional agility drills
 - Backward running
 - Side slides



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- Fast feet drills
- Cone step overs
- Plyometric double and single leg jumps

Weeks 12+:

- Running progression
- Sports specific drills
- Traditional weight training

Criteria to Return to Competition:

- Full pain-free ROM & flexibility
- Hip strength equal to opposite side
- Single leg pick up with level pelvis
- Ability to perform sport specific drills at satisfactory level & without pain
- Satisfactory Clinical Exam
- Approval by Physician