

Philip A. Deffer, MD Jason C. Hough, DO John A. Leupold, MD Christopher J. Rierson, DO Seth W. Harrer, MD Andrew G. Pick, DO

PODIATRY

Timothy D. Blankers, DPM Jesse R. Wolfe, DPM

CLINIC LOCATIONS

Spencer Storm Lake Spirit Lake Estherville Emmetsburg Pocahontas Cherokee Primghar Sibley Algona

OFFICE LOCATIONS

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www.nwiabone.com

Femoroplasty

- •Allowed full weight bearing, but use crutches for four weeks
- Avoids risk of fracture through area of recontoured head neck junction.
- Protects against unexpected inordinate torsional or twisting forces, while muscle strength and response are regained
- •Bony strength mostly unchanged at four weeks, but muscular function can protect the joint
- •Vigorous impact loading avoided for 12 weeks
- •Allows for bone remodeling/healing
- Aggressive functional progression delayed until 12 weeks
- Then progressed to tolerance
- •Resumption of full activities anticipated at 4-6 months
- Variable as dictated by hip symptoms
- Always use pharmacologic prophylaxis against heterotopic ossification (unless contraindicated)
- Quiz patient
- Must initiate and maintain immediately postop

Phase I: Initial Exercise (Weeks 1-3)

- •Week 1
- Ankle pumps
- Glut, quad, HS, adduction
- Heel slides, active-assist range of motion
- Log rolling
- Pelvic tilt, trunk rotation
- Double leg bridges
- Seated heel lifts
- Seated knee extension



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- Prone positioning POE, prone knee flexion
- Standing abduction, adduction, extension, flexion without
- •Standard stationary bike without resistance at 3 days postop (10min if tolerated)
 - Upper body ergometer, upper body strengthening
 - •Pain dominant hip mobilization- grades I, II
- Week 2 (in addition to above)

resistance

- Supine marching, modified dead bug
- Abduction isometrics
- Ankle PNF
- Superman
- •4 way theraband resistance on affected side (start very low resistance)
- •Pool water walking, ROM, march steps, lateral steps, backward walking, mini-squats, heel raises, hamstring and hip flexor stretches

Week 3

- •Continue stationary bike with minimal resistance 5 min. increase daily
- Weight shifts- standing, sitting supported, anterior/ posterior, laterals, physioball
- $_{\bullet}\%$ mini squats, standing heel lifts, wall mini-squats, physioball mini-squats with cocontraction
 - Hip flexion, IR/ER in pain free range
 - Ankle resistance with dead bug
 - Double leg bridges to single leg bridges
 - Clamshells (pain-free range)
 - •3 way leg raises- abd, add, ext



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- Kneeling hip flexor stretch (short of pain)
- •Quadriped 4 point support, progress 3 point support, progress 2 point support
 - •Seated physioball progression- active hip/knee
- $_{\bullet}\mbox{Active}$ range of motion with gradual end range stretch within tolerance
 - •Stiffness dominant hip mobilization- grades III, IV

Goals

- Restore ROM
- ODiminish pain and inflammation
- OPrevent muscular inhibition
- ○Normalize gait

Criteria for progression to Phase 2

- Minimal pain with phase 1 exercises
- OMinimal range of motion limitations
- ONormalized gait with one or two crutches

Phase 2: Intermediate exercises (Weeks 4-6)

- •Weeks 4 and 5
 - Wean off of crutches after 4 weeks
 - Gradually increase resistance with stationary bike
 - Crunches
- •Standing theraband/pulley weight flexion, adduction, abduction, extension, multihip machine
 - •Single leg sports cord leg press (long sitting) limiting hip

flexion

adductors

- Shuttle leg press 90 degree hip flexion with cocontraction of
 - Single leg balance- firm to soft surface



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- •Clamshells with theraband
- Pool water ex. flutter kick swimming, 4 way hip with water weights, step-ups
- •Forward and lateral walking over cups and hurdles (pause on effected limb) add ball toss while walking (week 5)
 - •Initiate elliptical machine (week 5)
- Week 6
 - •Single leg balance- firm to soft surface with external perturbation (ball catch, sports specific/ simulated ex.)
 - Leg press (gradually increasing weight)
 - Physioball hamstring ex. hip lift, bent knee hip lift, curls,

balance

- •Superman on physioball- 2 point on physioball
- Knee extensions, hamstring curls
- Manual/ theraband PNF
- •Sidestepping with resistance (pause on effected limb) sports cord walking forward and backward (pause on effected limb)
 - Bosu squats

Goals

- Restore pain free range of motion
- Initiate proprioception exercises
- o Progressively increase muscle strength and endurance

Criteria for progression to Phase 3

- OMinimum pain with Phase 2 ex.
- OSingle leg stance with level pelvis

Phase 3: Advance exercises

- •Weeks 7-8
 - Full squats
 - Single stability ball bridges



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- •Step-ups with eccentric lowering
- •Lunges progress from single plane to tri-planar lunges, add med balls for resistance and rotation
- •Theraband walking patterns- forward, side stepping, carioca, monster steps, backward ½ circles forward/ backward- 25 yds. Start band at knee height and progress to ankle height
- •Side steps over cups/hurdles (with ball toss and external sports cord resistance) increase speed
- •Single leg body weight squats, increase external resistance, stand on soft surface

Goals

- ORestoration of muscular endurance/ strength
- ORestoration of cardiovascular endurance
- Optimize neuromuscular control/ balance/ proprioception

Criteria for Progression to Phase 4

- OSingle leg mini-squat with level pelvis
- o Cardiovascular fitness equal to preinjury level
- ODemonstration of initial agility drills with proper body mechanics

Phase 4: Sports specific training rehab clinic based progression

- •Weeks 9-11
 - All phase 3 exercises
 - Single leg pick ups, add soft surface
- Pool running (progress from chest deep to waist deep), treadmill jogging
- Step drills, quick feet step ups (4-6 inch box) forward, lateral, carioca
 - Plyometrics, double leg and single leg shuttle jumps
- •Theraband walking patterns 1 rep of six exercises x 50yds, progress to band at knee height and ankle height



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Sports specific training on field or court

- •Weeks 12 and on
 - Running progression
 - Sport specific drills
 - Traditional weight training

Criteria for full return to competition:

○Full ROM

OHip strength equal to uninvolved side, single leg pick up with level pelvis

- OAbility to perform sport-specific drills at full speed without pain
- Completion of functional sports test