Rehabilitation of Sports Hernia

(Involving Adductor Tenotomy, Ilioinguinal Neurectomy and Osteitis Pubis)

An appendix follows this protocol for examples of exercises in each phase of rehabilitation. There is little research available on the protocol for sports hernia rehabilitation. The following protocol is what I have found to be successful in rehabilitation of a post operative sports hernia repair. Additional information and resources can be attained through Dr. Brown at (http://www.sportshernia.com/meet-dr-brown/) or through my contact information listed below:

Ryan Monagle, PT, DPT
Personally Fit, Inc.
rmonagle@personallyfitonline.com
858-485-6706

(Phase I) Weeks 1-3

GOAL: Tendinous tissue takes 3 weeks to remodel, heal and become stable. During this phase of rehab PT should focus on treating the musculoskeletal systems above and below the surgical area, decrease pain and swelling and protect the surgery site.

- Passive Range of motion of bilateral hip joints
  - Avoid painful end-ranges and excessive hip abduction that will put stress on the surgery sites
- Joint mobilization of lumbar spine
  - Grade II-III for a combined effect of pain modulation and improvement with any lumbar mobility dysfunction
- Soft Tissue mobilization of lumbar paraspinal musculature and incision sites
  - Lumbar paraspinal tissue is often guarded and would benefit from manual physical therapy techniques
  - Self cross friction massage over incision will decrease risk of scar adhesions (as soon as the stitches/sutures are removed)
- Educate patient on return to normalized walking pattern. Patient may walk provided that gait pattern is normal and remains pain free.
- Avoid “bearing down” or holding one’s breath to decrease intra-abdominal pressure
- Ice for pain and inflammation
o 15-20 minutes every 3-4 hours during the day

(Phase II) Weeks 4-6

GOAL: Improve soft tissue flexibility. Re-introduce core strengthening and mild to moderate cardiovascular re-training.

- Begin with flexibility training of all lower extremity muscle groups, i.e. hamstrings, adductors, gluteals, calves, hip flexors, quadriceps, etc.
  o Low load, long duration to soft tissue in order to have plastic changes in tissue
- Core strengthening/Core Stability exercises, i.e. Pelvic tilts, Planks, Dead bugs, etc.
- Isolated muscle progressive resistive exercises
  o Straight leg raise for hip flexors
  o “Clamshells”/Sidelying hip abduction and bridging for gluteals
  o Sidelying hip internal rotation “Cowboys” for hip internal rotators and adductors
  o Wall squats/sits for hamstrings and quadriceps
  o Heel raises for calves
- Straight plane motion of weight bearing, body weight progressive exercises
  o Forward lunges (not deep lunges)
  o Single leg pendulum dead lifts
  o Moutainclimbers (use of plinth or table to start)
- Proprioception training
  o Single leg balance activities including cone taps, hurdles, hip sliders, etc.
  o Unstable/dynamic surface added to progress difficulty, i.e. foam pad, pillow, tilt board
- Cardiovascular retraining
  o Elliptical use to pain free tolerance, monitor distance and time
  o Seated/Recumbent bike
  o Treadmill walking
  o Swimming

(Phase III) Weeks 7-8

Goal: Progress all flexibility and progressive resistance exercises to involve all three planes of motion. Implement return to running. Begin to mimic sport specific activities in open kinetic chain and closed kinetic chain.

- Progress flexibility training of all lower extremity muscle groups, i.e. hamstrings, adductors, gluteals, calves, hip flexors, quadriceps, etc.
  o Dynamic warm-ups, i.e. world’s greatest stretch, yoga, inch worms, etc.
- Core strengthening/Core Stability exercises
  o 3-way planks (forward and on each side)
  o Prone walkouts using a physioball
  o Russian Twists, upper and lower extremities
• Tri-planar motion of weight bearing, body weight progressive exercises
  o Forward/lateral lunges
  o Braided lunging
  o Sumo walking
  o TRX squats/rows/point-pulls
• Proprioception training
  o Sport cords arcs
  o Sport forward/backward shuffle
• Cardiovascular retraining
  o Returning to running on even, flat ground
  o Line jumps / Box jumps
  o Ladder drills
  o High knees, butt kicks, bounding, high skipping, bear crawls, etc.
• If ANY pain is felt during any of the exercises, modifications must be made to insure patient tolerance to the exercise, pain free
  o Decrease frequency, intensity, resistance etc.

(Phase IV)Weeks 9-12

GOAL: Improve balance and proprioception. Improve power and velocity of sport specific activities indicating a safe return to sport at pre-injury level

• Plyometrics
  o Shuttle run, BOSU drills, Box jumps, Medicine ball tosses/lunges
  o Weighted rope drills
• Sport specific drills
  o Vertical leaping for volleyball
  o Box out drills for basketball
  o Cone dribbling for soccer, etc.
• Proprioception training
  o Single leg balance activities with weight resistance such as single leg cross body punches with 5 lb. weights
  o Single leg ladder/BOSU drills
• Cardiovascular retraining
  o Progress patient to uneven surface running at an intensity that is required for their specific sport
    ▪ Hill sprints
    ▪ Cross country running
    ▪ Track or hardwood sprints/running
  o Soccer is more endurance running, multiple miles
  o Track and field sprinting is short duration
  o Basketball is a good mixture; sprinting along with middle distance running
Appendix of Exercises

Phase II

1. Clamshells: Hip abduction with back and ankles fixed in one position.

2. Cowboys: Side-lying Hip internal rotation against gravity.

3. Single leg pendulum dead lifts: single leg dead lift keeping back straight.

4. Tilt board: Slowly control tilt board side to side while keeping hips level.
Phase III

5. Inch worms: Start in plank position and walk feet up into pike position.

6. A. Russian twists (upper extremity): Keeping the back on physioball, rotate side to side with abdominal contraction.
B. Russian Twists (Lower extremity): Sacral sit keeping abdominals engaged and rotate side to side, touching the ball to the mat.

7. TRX point to pull: Full squat while pointing to the ground behind you, then pull up and reach to the top of the strap.

8. Sport cord forward/backward shuffle: resisted forward/backward running
9. Ladder drills: side to side and forward hopping, skipping, bounding drills

Phase IV

10. Weighted rope drills: Single leg stance with heavy rope oscillations

11. Vertical Leap (volleyball/basketball specific): Max jump with controlled decelerated landing
12. Single leg cross body punches with 5 lb. weights: Opposite arm will cross the weight in front of stance knee, then rise up and punch across your body with other arm.