

Hip Arthroscopy Pre-operative Physical Therapy Protocol*

Name _____ Today's Date _____

Diagnosis _____

Frequency:

Month 1: 2 to 3 times per week

Side: R / L

Month 2: 2 times per week

Month 3: 2 times per week

Evaluate and Treat

GENERAL PRINCIPLES

- This protocol is written for the treating physical therapist and is not a substitute for a home exercise program
- Patients may progress through rehab at different rates, so do not push through pain
- Use clinical decision making to guide patient care
- Patient education is extremely important component of successful rehab

- PRECAUTIONS:
 - Avoid hip flexor (iliopsoas) tendonitis
 - Avoid irritation of lateral hip - TFL, ITB, trochanteric bursa, abductors (gluteus medius/minimus)
 - Avoid low back pain and SI joint pain from compensatory patterns - emphasize good form/control
 - Do not push through pain

*Courtesy: Shane J. Nho, MD. Hip arthroscopy. Rush University Medical Center. Chicago, IL, USA.

- MANUAL THERAPY:
 - Soft tissue mobilization x 20-30 minutes
 - Begin with superficial techniques to target superficial fascia
 - Progress depth of soft tissue mobilization using deep tissue massage, effleurage, petrissage, strumming, perpendicular deformation, and release techniques (including ART)
 - Continue to use manual therapy including soft tissue and joint mobilizations to treat specific motion limitations and joint tightness
 - Soft tissue mobilization to address any soft tissue stiffness at surgical sites, especially pinching at the anterior hip
 - Address any lumbar or pelvic dysfunction utilizing manual therapy when indicated
 - Anterior:
 - Hip flexors
 - Rectus femoris
 - Inguinal ligament
 - TFL
 - Sartorius
 - Lateral:
 - ITB
 - Gluteus medius
 - Iliac crest, ASIS
 - Medial:
 - Adductors
 - Medial hamstring
 - Pelvic floor
 - Posterior:
 - Gluteus maximus
 - Gluteus medius/minimus
 - Deep hip ER's (gemelli, obturators, quadratus femoris)
 - SI joint, PSIS
 - Sacral sulcus
 - Erector spinae
 - Quadratus lumborum

MUSCLE ACTIVATION, NEUROMUSCULAR RE-EDUCATION, STRENGTHENING (0 - 12 weeks)

- ISOMETRICS ONLY
 - Gluteal sets - supine or prone, gently squeeze buttocks. Hold for 7 seconds = 1 rep. 30 reps
 - Quad sets - supine or prone, gently squeeze quads. Hold for 7 seconds = 1 rep. 30 reps.
 - TA isometrics with diaphragmatic breathing - supine, place 2 fingers 2 inches inside pelvis on lower abdomen at the wasteband. Gently draw in until you feel tension under your fingers. You may also perform kegel prior to contraction. If you feel rectus abdominis contraction, then you are squeezing too hard. Do not hold breath during contraction. Hold contraction for 5 slow breaths, then relax = 1 rep. Do 30 reps.
- SUPINE PROGRESSION:
 - Supine hooklying hip IR (bring knees together) and ER (30-45 degrees). 30 reps IR, 30 reps ER.
 - Supine lower trunk rotations: hooklying position. Slowly rotate legs side-to-side. Initiate motion at hip joint and continue until pelvis and lumbar spine are off bed. 30 reps each side. 2 times per day
 - TA isometric with marching: hooklying position. Perform a TA isometric maintaining a level pelvis. Slowly raise one foot off ground not moving the pelvis and isolating movement at the hip joint only. Repeat with other leg as a marching type motion. 10 reps per leg, 2 sets per side.
 - Pelvic clocks (12 - 6 o'clock; 3 - 9 o'clock; diagonals). 10 reps each direction. 2 times per day
 - TA isometric with bent knee fall-outs: supine, one knee flexed 90 degrees, hip at 45 degrees, other leg extended. Slowly rotate knee out to 30 degrees while keeping level pelvis and TA engaged. 15 reps per set. 2 sets per side.
 - Supine FABER slides with TA isometric: supine, place heel of operative leg at medial malleolus of opposite leg. Slowly slide heel and foot up the leg to the level of the knee. Slowly stretch towards FABER position while maintaining motion restriction precautions. 10 reps per set. 2 sets per side.

- Double-leg bridging progression: hooklying position. Slowly raise pelvis off ground. Imagine moving one vertebra off the floor at a time from sacrum to thoracic spine only. Maintain level pelvis. 10 reps, 2 sets.
 - Bridge with adduction isometric. Pillow between knees. 10 reps, 2 sets.
 - Bridge with abduction. Theraband or pilates ring around knees. 10 reps, 2 sets.
 - Bridge with single knee kicks. 10 reps, 2 sets.
- **SIDE-LYING PROGRESSION:**
 - Side-lying clams. On uninvolved side. Maintain stable neutral spine and pelvis. 15 reps. 2 sets.
 - Side-lying reverse clams. On uninvolved side. Maintain stable neutral spine/pelvis. 15 reps, 2 sets.
 - Side plank progression:
 - Half side plank taps. On involved side. Hips 0 and knees 90 degrees. Bottom elbow out in front 90 degrees. Slowly push both knees into table so that pelvis rises in line with shoulders. Pause at top for 3 seconds. 15 reps, 2 sets.
 - Half side plank holds. Same as taps, except hold at top for 30 seconds - 3 minutes. 3 reps
 - Modified side plank holds. Same as above, except extend top knee.
 - Full side planks. Both hips and knees extended. Hold seconds - 3 minutes. 3 reps.
- **PRONE PROGRESSION:**
 - Prone alternate knee flexion with TA isometric. Perform TA isometric with level pelvis. Slowly flex one knee at a time. 15 reps. 2 sets.
 - Prone hip IR, ER. Slowly rotate into ER, IR within ROM precautions. 15 reps. 2 sets.
 - Prone hip extension with extended knee. Perform TA isometric with level pelvis. Lift leg just off of bed or table via hip extension gluteus maximus, not hamstring. 15 reps. 2 sets.
 - Prone hip extension with flexed knee. Perform TA isometric with level pelvis. Flex knee 90 degrees, then lift leg just off of bed via hip extension gluteus maximus. 15 reps. 2 sets.
 - Prone alternate arm and leg extension. As above, except simultaneously lift opposite arm. Switch sides. 15 reps. 2 sets.
 - Prone hip extension on medicine ball. Lie on medicine ball. Place hands on floor push-up position, legs extended so that toes are on floor. Slowly lift one arm and opposite leg simultaneously. 15 reps. 2 sets.
 - Prone plank progression:
 - Half prone plank / pillar bridge. On toes and elbows. Hold 30 seconds to 2 minutes.
 - Full prone plank. On hands in push-up position and toes. Hold 60 seconds to 2 minutes.
 - Full or half prone plank on BOSU ball. Feet on either hard or soft side of ball. Hold 60 seconds to 2 minutes.
 - Full or half prone plank with lateral slides. Place toes on slide board, slowly abduct legs out to side. Hold 60 seconds to 2 minutes.
- **QUADRUPED PROGRESSION:**
 - Quadruped anterior/posterior pelvic tilts. Tilt pelvis arching and rounding low back. 30 reps. 2 sets
 - Quadruped arm lifts. Lift one arm at a time keeping trunk/pelvis still. 15 reps. 2 sets.
 - Quadruped hip extensions. Lift one leg at a time keeping trunk/pelvis still. 15 reps. 2 sets.
 - Quadruped alternate upper/lower extremity lifts. Lift one arm, opposite leg simultaneously. 15 reps. 2 sets.
- **1/2 KNEELING PROGRESSION:**
 - 1/2 kneeling pelvic clocks. Half kneeling on involved knee. 12-6, 1-7, 2-8, 3-9, 4-10, 5-11. 20 reps, 2 sets. Repeat on uninvolved knee.
 - 1/2 kneeling weight shifts. Half kneeling on involved knee. Shift body forward to feel anterior hip stretch on kneeling side. Hold 15 seconds. 15 reps. 2 sets. Repeat on uninvolved knee.
 - 1/2 kneeling upper extremity strengthening. Half kneeling on involved and uninvolved knee. Use dumbbells, medicine balls, etc to strengthen shoulder girdle.
- **GAIT PROGRESSION:**
 - Standing side-to-side weight shifts. Stand at edge of table and shift weight side to side. Hold for 90 seconds, 2 sets.
 - Backward walking. Walk backward slowly focusing on hip extension.
 - Side stepping. Knees slightly flexed. 30 feet each direction.
 - Side stepping with resistance band. Band around ankles. 30 feet each direction

- **CLOSED CHAIN SQUAT PROGRESSION:**
 - Exercise ball wall sits. Stand with exercise ball placed in low back against wall, feet shoulder width apart. Slowly squat as if sitting in a chair, then return to standing position. 15 reps. 3 sets.
 - Mini squats. Standing to 30 degrees knee flexion. 15 reps. 3 sets.
 - Double leg squats. Slowly work on squat depth to 70 degrees. 15 reps. 3 sets.
 - Double leg squats with weight shifts. Slowly shift weight side-to-side while squat. 15 reps. 3 sets.
 - Balance squats. Place uninvolved foot on chair behind you for balance only. Begin with squat to 30 degrees. Avoid pushing through support leg. 15 reps. 3 sets.
 - Single leg mini-squats. Standing to 30 degrees knee flexion. 15 reps. 3 sets. Avoid femoral valgus and IR and dropping pelvis toward contralateral side.
 - Single leg squats. Standing to 70 degrees knee flexion. 15 reps. 3 sets.

- **LUNGE PROGRESSION:**
 - Split lunge. Staggered split stance. Involved leg forward. Slowly lower body toward floor, bending both knees, so that final position is lunge. 15 reps. 3 sets.
 - Forward lunge. Slowly lunge forward onto involved leg. 15 reps. 3 sets.
 - Lateral lunge. Slowly lunge laterally onto involved leg. 15 reps. 3 sets.
 - Reverse lunge. Slowly perform lunge stepping backward with uninvolved leg. 15 reps. 3 sets.
 - Lunge with trunk rotations. Slowly rotate trunk side-to-side with arms out in front from any of the lunge positions. 15 reps. 3 sets.

- **BALANCE PROGRESSION:**
 - Single leg balance. Shift weight to involved leg. Hold 30-60 seconds. 3 repeats.
 - May stand on BOSU ball for increased difficulty.
 - Standing single leg balance with opposite hip abduction isometric. Stand on involved leg with opposite knee against exercise ball resting against wall. Bend both knees 20 degrees. Then bend uninvolved knee 90 degrees and press outside of knee into ball. Make sure pelvis does not dip by squeezing buttock. Static hold 10 seconds. 15 reps.

CARDIOVASCULAR PROGRAM

- Stationary bike:
 - Resistance as tolerated; start 20 minutes at a time, increase 5 minutes per week beginning at week 2
- Aquatic Therapy:
 - Freestyle swimming, treading water
- Elliptical:
 - Resistance as tolerated; start at 10 minutes at a time, increase 5 minutes per week for next 6 weeks
- Treadmill program:
 - 0% incline; start 20 minutes at a time, increase 5 minutes per week as tolerated
- Jogging and running program:
 - Do not increase mileage more than 10% per week, or more than 10% per long run

Comments:

Signature _____ Date _____