Hip Protocol Following Acetabular Labral Repair/Reconstruction
Specific for the Dancing Population

ADDITIONAL USES OF PROTOCOL

PAO
Begin with Phase 2 after 8 weeks post-op.

ISCHIOFEMORAL IMPINGEMENT
Begin with Phase 3 but keeps legs neutral with derriere work.
Please limit extension, adduction and ER when used in combination.

NON-OPERATIVE FAI PATIENTS
Begin with Phase 6.

ADDITIONAL RECOMMENDATIONS

Dancers need to be especially careful around RED-S and need appropriate nutrition to facilitate healing
Please distribute the attached *Nutrition Guidelines for Healing* and *Fueling an Athlete* included at the end of this protocol to patients and their families.

Use of a sports psychologist is also highly recommended. Visits can be helpful to deal with being sidelined with an injury, identity, fears with return to sport/dance.

After 12 weeks post-op patients may begin Recovery Work between sessions in the follow ways:

- A light walk up to a mile (avoid TM on incline at this time)
- Foam Rolling (Please do not roll on the side of the leg)
- Light swimming preferably with a block between knees
- Aqua Jogging
- Pilates
- Yoga

Designed by Dr. Emily Becker, PT

Please Contact Dr. Emily Becker, PT with questions
Not liable for misuse of the protocol or if misinterpreted
804-221-1273
artsandathleticspt@gmail.com

PHASE ONE
WEEKS 1-4

PRECAUTIONS

No resisted hip flexion: Ask your surgeon as some desire no resisted hip flexion during the entire rehabilitation process.

Weight bearing
General guidelines are NWB or TTWB for the first 3-6 weeks with an assistive device.

Range of Motion

Flexion:	Limit to 90°	for 10 - 14 days
Extension:	Limit to 0°	for 10 - 14 days
Abduction:	Limit to 25°	for 10 - 14 days
External Rotation:	Limit to 30° in 90° of hip flexion or 20° in neutral prone	
Internal Rotation:	Limit to 0° in 90° of flexion in neutral prone to comfort	

GOALS

General
Minimize pain and inflammation
Protect the surgically repaired tissue
Initiate early motion exercises

Gait
"Maintain a symmetrical gait pattern to prevent concomitant stress throughout the lower extremity and spine. If this gait pattern is not established, a muscular imbalance of tight hip flexors and erector spinae with inhibition of the gluteals and abdominals (lower crossed syndrome) could develop. The potential ramifications include increased weight-bearing through the acetabulum with labral tissue stresses secondary to hip flexor tightness." *Garrison, C. N Am J Sports Phys Ther. 2007 November; 2(4): 241–250.*

Posture
Typically the adolescent population presents with anteversion. Anteversion is negatively correlated with femoral external rotation so appropriate LE alignment must be achieved and turnout may not be forced throughout the recovery process and with return to dance. The increased anterior pull of the muscles can create traction injuries to the labrum by the iliopsoas. Muscular imbalances are also present due to the inhibition of the posterior muscles and abdominals with over firing the anterior muscles and the erector spinae. *Becker, PAMA Presentation; July 2013*

SUGGESTED PHYSICAL THERAPY INTERVENTIONS

MANUAL THERAPY

- **PROM** (within surgeon's instructions or those listed above)
- **Grade I Joint Mobilizations** of the hip as needed without a belt. Be sure to include prone lying. Long Axis traction is **not** recommended for the first two weeks and should be done with caution moving forward due to traction applied in surgical procedure. Be sure to assess the lumbar spine, sacrum, knee, foot and ankle for appropriate mechanics and mobility and perform any mobilizations as needed
- **Stretching** of ER/IR, Hamstrings, Quads. Limit Hip Flexor to prone lying and gentle manual stretching

EXERCISE

- **Cardio**
    - Begin biking with a high seat and no resistance. Recumbent bikes are **not** advised. Start with 5 minutes and progress 30 seconds each day until 10 minutes are completed on the bike in this first phase. At the end of phase one you may use light resistance if no signs of hip flexor overuse are present and you maintain less than 90° of hip flexion. **If hip flexor pain is present, please skip biking unless advised by the MD that hip flexor tendinitis risk is acceptable.**
    - Alternate cardio involves Upper Extremity weight lifting in a seated position with overhead emphasis as appropriate (ie do not use with patients who have shoulder pathology or POTS).

- **Table/HEP**
    - Ankle pumps
    - Isometric Hip Abduction
    - Hamstring sets
    - Glute sets
    - Quad sets
    - Transversus Abdominis
    - Heel Slides

During weeks 3-4 you may begin abduction, and extension SLR. Do **not** begin flexion SLR at this time, and use your best judgment with adduction

- **Pool**
    - Pool Walking at week 3-4 with wound healing is also appropriate in chest height water.
    - At 3 weeks post op and with appropriate scar healing start water walking with a flotation device to assist with gait mechanics and increasing weight bearing.

      Neck high water is 10% Weight Bearing
      Chest high water is 25% Weight Bearing
      Waist high water is 50% Weight Bearing

MODALITIES

- E-Stim
    - Begin with Russian Stim (or other noxious stim to tolerance) to the posterior glute to avoid inhibition. Have patient perform isometric glute sets in prone to assist with contraction. Watch for substitutions from low back.
- Ice/Heat PRN
- Compression Boots

PHASE TWO
WEEKS 5-7

PRECAUTIONS

No resisted hip flexion: Ask your surgeon as some desire no resisted hip flexion during the entire rehabilitation process

Weight bearing
General guidelines are NWB or TTWB for the first 3-6 weeks with an assistive device. Some newer research is looking at 4 weeks. Please double check with your MD for their preference.

Range of Motion
To individual patient tolerance. Recommended to have 25-50% or greater AROM as compared to uninvolved side to progress to Phase Two

Dance Technique
- No grande pliés
- Legs in neutral for any derriere exercises
- Only work in first and second position with all turnout less than 20° or work entirely in parallel
- No legs over 45°
- No centre work
- Watch for increased anterior pelvic tilt and correct to neutral spine
- Watch for appropriate LE mechanics and placement

GOALS

General
- Continue progressing ROM and soft tissue flexibility
- Transition the emphasis to strengthening while watching LE/Pelvic Alignment

SUGGESTED PHYSICAL THERAPY INTERVENTIONS

MANUAL THERAPY

- **Grade II Joint Mobilizations** of the hip.
    - Avoid going into hypermobility if thought to be a contributing factor to pathomechanics such as microinstability prior.
    - Be sure to assess the lumbar spine, sacrum, knee, foot and ankle for appropriate mechanics and mobility.
    - Kinetic chain joint mobilizations as needed
- More aggressive **PROM/ Stretching** for ER/IR as needed and within pain tolerance of patient.
    - May benefit from hip flexor release.
    - Remember the best access point is at the ilium just inside in 90° of flexion.

EXERCISE

- **Cardio**
    - Increase biking duration and intensity (resistance, speed) to tolerance, but remember alternatives and if hip flexors are still grumpy please utilize other cardio options from weeks 1-4.

- **Table/HEP**
    - ½ Foam Roll Bridge under the operated foot to minimize weight bearing if still required. Will offset weight to the non-operative side
    - Prone Glute lift with knee extension with a 2-inch lift of the leg (watch for isolation of the glute with no lumbar compensations)
    - Prone TKE with toes on the table in forced arch and straightening the knees
    - Heel/Toe Raises on ½ Foam Roller
    - Standing Mini Squats in neutral with hip initiation and knees over ankles to 45 degrees- If still on weight bearing precautions you can use the ½ foam roller under the operative side to place more weight on the non-operative leg
    - Tall Kneel Work like squat backs, core weighted ball circles as long as 50% weight bearing
    - Quadruped rocks for mobility
    - Bird dog slides (can keep both UE on the table or use a slider under the foot to help)

- **Pool**
    - Neck High to Chest High Water
    - Gait work is still beneficial especially backwards walking for hip extension progression, and side stepping just to the operated side
    - POOL BARRE
        - Squats
        - Heel Raises
        - Single leg balance with leg in coupe and parallel
        - Fondue to 45 degrees en croix in neutral no turnout

DANCE TECHNIQUE WORK

- **Pliés** (CKC squats) with equal weight between feet and minimal ER- No more than 20°. Can be done in first and second, but **no** grande pliés

- **Tendus en croix from neutral (parallel) or 20° of turnout** but maintain neutral alignment with derriere- no ER. No more than 10 each way, or to tolerance or failure of correct mechanics. Encourage lots of brushing to decrease overuse of hip flexor and increased quad use.

- **Ronde De Jambe** Halves- front to side, side to neutral back, neutral back to side, side to front all in parallel please

- **Fondu en croix from neutral position up to 20 degrees of turnout** with neutral back and no more than two sets en croix. Watch for anterior pelvic tilt, and encourage increased quad use to assist with lengthening the leg and decreasing the pull on the hip flexor

MODALITIES

- Ice/Heat PRN
- Stim for Muscle Activation and or Pain control
- Compression Boots

PHASE THREE
WEEKS 8-12

PRECAUTIONS

No resisted hip flexion: Ask your surgeon as some desire no resisted hip flexion during the entire rehabilitation process.

Dance Technique

REMEMBER the hips only get 60° of turnout so try and work just in 60° for optimal strength work. The other 30° comes from the knees and foot and ankle. While returning to dance it is imperative that the 6 deep femoral external rotation muscles get strong so please do not force the turnout past 60°

- Complete Barre without relevé by 12 weeks with **No** grande plié, ronde de jambe en l'air or adagio
- Legs start to turn out gradually for any derriere exercises
- No legs over 45°
- No Jumping, Turning, Pointe Work
- Watch for increased anterior pelvic tilt and correct to neutral spine
- Watch for appropriate LE mechanics and placement
- Limit Reps to no more than 15 of any direction
- Start centre work by week 12 but limit to tendus, dégagés, fondus, and ronde de jambe

GOALS

General

- Symmetrical ROM
- Integrated functional strengthening

SUGGESTED PHYSICAL THERAPY INTERVENTIONS

MANUAL THERAPY

- **Grade II Joint Mobilizations** of the hip and kinetic chain as well as lumbar spine PRN
- Continue with more aggressive **PROM/ Stretching** for all motions PRN and within pain tolerance of patient.

EXERCISE

- **Cardio**
    - Increase biking duration and intensity (resistance, speed) to tolerance
        - If hip flexors are still grumpy, work more in the pool if access is not an issue, or complete strength training with weighted deadlifts and squats to improve strength while increasing heart rate.

        - The weight training will likely be closer to the 12 week mark and patients need to have no compensatory actions with the movements before they begin.

- **Table/HEP**
    - BOSU Bridges-(black side up) can do 30 second isometric hold, 30 little pulses up and down an inch and then 30 full motion bridges
    - HS Swiss Ball Pull-In's
    - Swiss Ball Ab Roll Outs
    - Deadlifts with and without weights
    - Squats on TRX or pull off of the barre for 90-90 hip angle and knees over ankles
    - Planks Front and Side

- **Reformer Work**
  (Light Resistance) Watch Pelvic Alignment and over-recruitment of anterior musculature
    - HS Slides(quadruped)
    - Leg Circles
    - SL Pull Down
    - Standing Plank slide
    - DL Bridges
    - Standing Slides front/side/back with and without Plié
    - Heel Raises
    - Squats both SL and DL

- **Yoga**
  Watch alignment but can complete:
    - Down dog
    - Warrior poses
    - Chair pose
    - Half standing forward bend
    - Cobra
    - High lunge
    - Cow pose
    - Sun salutation

- **Dance Conditioning**
    - 6 inch step ups into neutral jazz pirouette position from neutral 4th position (or use a Yoga Block - will be about 3 inches but most dancers have one readily available) up to 30 reps or until failure in form like valgus
    - Deadlifts with double leg and up to 25% body weight up to 30 reps or until failure in form like valgus
    - Squats with double leg and up to 25% body weight up to 30 reps or until failure in form like valgus
    - UE Weight Lifting like front, side, back raises, bench press, RC
    - Squats with OH weight press up

- Lunge with weighted Rows but back leg straight
- Lunge with rotation but back leg straight
- Airplanes in arabesque
- Side Plank with leg to second lift
- Side Plank with leg to second lift and small neutral leg circles
- Front Plank with arabesque to neutral lift

- **Pool**
  - Freestyle swimming only kicking every fourth lap otherwise with buoy between knees
  - Pool Barre as before

DANCE TECHNIQUE: BARRE

- **Pliés** (CKC squats) with equal weight between feet and minimal ER- No more than 60°. Can be done in 1st and 2nd positions but no grande plié

- **Tendus en croix from first position** – start adding turnout with derriere. No more than 15 each way or to tolerance. Encourage lots of brushing the foot along the floor to decrease overuse of hip flexor

- **Ronde De Jambe** - Complete motion

- **Fondue en croix from first position** - No more than two sets en croix. Watch for anterior pelvic tilt, and encourage increased quad use to assist with lengthening the leg and decreasing the pull on the hip flexor

- **Frappe en croix from first position** - No more than two sets en croix. Watch for increased pelvic motion to compensate for lack of hip flexion strength on surgical side

- **Jeté en croix from first position** - No more than two sets en croix. Legs remain in the 45° range all directions

DANCE TECHNIQUE: CENTRE (same precautions as above)
- Pliés
- Tendus
- Dégagés/Jetés
- Ronde de Jambes
- Fondues

MODALITIES
- Ice/Heat PRN
- Stim for pain control or muscle activation
- Compression Boots

PHASE FOUR
WEEKS 12-18

PRECAUTIONS
No resisted hip flexion
Ask your surgeon as some desire no resisted hip flexion during the entire rehabilitation process.

Dance Technique
- Complete barre (if no valgus alignment – no grande pliés in 4th or 5th).
- No relevé except for first position; noted below).
- **No** Ronde de Jambe en l'air or Adagio
- Legs start to turn out for any derriere exercises
- No legs over 60°
- No Jumping, Turning, Pointe Work
- Watch for increased anterior pelvic tilt and correct to neutral spine
- Watch for appropriate LE mechanics and placement
- Limit Reps to no more than 15 of any direction
- Centre work but limit to tendus, dégagés, fondus, ronde de jambes, across the Floor
- without jumping or relevé

GOALS
General
Safe, gradual, and effective return to 50-75% of previous activity level.

SUGGESTED PHYSICAL THERAPY INTERVENTIONS

MANUAL THERAPY
- **Grade II Joint Mobilizations** of the hip, lumbar spine PRN
- Continue with more aggressive **PROM/ Stretching** for all motions PRN and within pain tolerance of patient.

EXERCISE

- **Cardio**
  - Increase biking duration and intensity (resistance, speed) to tolerance
    - If hip flexors are still grumpy stay with pool walking or weight lifting or Pilates, Yoga, or Dance Based Conditioning listed above

- **Table/HEP**
  - SL bridging on BOSU with Black Side Up and Hip Flexion Marches
  - BOSU DL Bridges with banded ER
  - Prone over BOSU Blue Side Up Glute Extension
  - Tall Kneel Squats With Core Ball Femoral ER Squeeze between Heels
  - Core Ball Ab Work:

        - Dead Bugs
        - Double leg drop 3 inches and return with or without UE light weights
    - Foam Roller Core with Small Leg Circles
    - Foam Roller

- **Basic Pilates** mat class elements you can add in
    - Leg Circles
    - Bicycles
    - Hot Potatoes
    - Swimming

- **Reformer Work**
  Light Resistance) Watch Pelvic Alignment and over-recruitment of anterior musculature
    - Single leg Squats
    - Single leg heel raises
    - Side lying pull downs single leg
    - Side lying front pull downs single leg

- **Dance Conditioning (* are new)**
    - 6 inch step ups into neutral jazz pirouette position from neutral 4th position (or use a Yoga Block - will be about 3 inches but most dancers have one readily available) up to 30 reps or until failure in form like valgus
    - Deadlifts with double leg and up to 25% body weight up to 30 reps or until failure in form like valgus
    - Squats with double leg and up to 25% body weight up to 30 reps or until failure in form like valgus
    - UE Weight Lifting like front, side, back raises, bench press, RC
    - Squats with OH weight press up
    - Lunge with weighted Rows but back leg straight
    - Lunge with rotation but back leg straight
    - Airplanes in arabesque
    - Side Plank with leg to second lift
    - Side Plank with leg to second lift and small neutral leg circles
    - Front Plank with arabesque to neutral lift
    - *Single leg balance in coupe with weighted 5 lb ball OH or weight with ball moving front and back, side to side, and in a circle
    - *Deadlift on a single leg to table top arabesque and up to parallel retire
    - *Tendu to Fondu with Rotation to make Triplanar: so front, side, back with a twist towards the back leg, but stay lifted on the standing leg to eliminate shear over the hip joint

- **Pool**
    - Freestyle swimming only kicking every fourth lap
    - Pool Barre with same Precautions as above

DANCE TECHNIQUE: BARRE

- **Pliés** (CKC squats) with equal weight between feet and minimal ER- No more than 60°. No grande pliés.

- **Tendus en croix from first position and fifth position** – start adding turnout with derriere. No more than 15 each way or to tolerance. Encourage lots of brushing the foot along the floor to decrease overuse of hip flexor

- **Ronde De Jambe** - Complete motion

- **Fondu en croix from fifth position** - No more than two sets en croix. Watch for anterior pelvic tilt, and encourage increased quad use to assist with lengthening the leg and decreasing the pull on the hip flexor

- **Frappé en croix from fifth position** - No more than two sets en croix. Watch for increased pelvic motion to compensate for lack of hip flexion strength on surgical side and decreased hip extension moment that they may use lumbar spine to compensate for.

- **Grande Battement en croix from fifth position** - No more than two sets en croix. Legs remain in the 60° range all directions.

- **Relevés** – No more than 20 in first position with equal weight distribution and correct alignment

DANCE TECHNIQUE: CENTRE (same precautions as above)

- Pliés
- Tondues
- Dégagés
- Ronde de Jambes
- Fondues

MODALITIES

- Ice/Heat PRN
- Stim as needed for pain control or muscle activation
- Compression Boots

PHASE FIVE

4-5 Months Post Op

PRECAUTIONS

No resisted hip flexion: Ask your surgeon as some desire no resisted hip flexion during the entire rehabilitation process.

Dance Technique

- Complete Barre (if no valgus alignment – no grande pliés in 4th or 5th). Start gentle Ronde de Jambe en l'air.
- **No** Adagio
- Legs turn out for any derriere exercises
- May begin relevé in combination as long as it is not fast
- No legs over 60°
- No Jumping, No Repetitive Turning, No Pointe Work
- Watch for increased anterior pelvic tilt and correct to neutral spine
- Watch for appropriate LE mechanics and placement
- Limit Reps to no more than 20 of any direction
- Centre work but limit to tendues, dégagés, fondues, ronde de jambs, Across the Floor, Pirouettes in combination (no more than 8 reps)

GOALS

General

Safe, gradual, and effective return to previous activity level

SUGGESTED PHYSICAL THERAPY INTERVENTIONS

MANUAL THERAPY

- **Grade II Joint Mobilizations** of the hip, lumbar spine PRN
- Continue with more aggressive **PROM/ Stretching** for all motions PRN and within pain tolerance of patient.

EXERCISE

- **Cardio**
  - Increase biking duration and intensity (resistance, speed) to tolerance
  - If Hip Flexors are still grumpy focus on dance conditioning, Pilates, Pool, or Yoga as listed above

- **Table/HEP**
  - Planks with rocks
  - Hip dips
  - Leg lifts into arabesque

- Spiderman planks
- Plank to down dog
- Side plank with arm overhead and then rotate under body
- Side plank with side leg lift
- Glute 4 Ways (Hip Extension, Hamstring Curl, Rainbow, side/back lift)
- Wall Sits with PNF core, heel and toe raises

- **Basic Pilates** mat class elements you can add in
  - Leg Circles
  - Bicycles
  - Hot Potatoes
  - Swimming

- **Reformer Work**
  Light Resistance) Watch Pelvic Alignment and over-recruitment of anterior musculature
  - Single leg Squats
  - Single leg heel raises
  - Side lying pull downs single leg
  - Side lying front pull downs single leg

- **Dance Conditioning (* are new)**
  - 6 inch step ups into neutral jazz pirouette position from neutral 4th position (or use a Yoga Block - will be about 3 inches but most dancers have one readily available) up to 30 reps or until failure in form like valgus
  - Deadlifts with double leg and up to 25% body weight up to 30 reps or until failure in form like valgus
  - Squats with double leg and up to 25% body weight up to 30 reps or until failure in form like valgus
  - UE Weight Lifting like front, side, back raises, bench press, RC
  - Squats with OH weight press up
  - Lunge with weighted Rows but back leg straight
  - Lunge with rotation but back leg straight
  - Airplanes in arabesque
  - Side Plank with leg to second lift
  - Side Plank with leg to second lift and small neutral leg circles
  - Front Plank with arabesque to neutral lift
  - * Single leg balance in coupe with weighted 5 lb ball OH or weight with ball moving front and back, side to side, and in a circle
  - * Deadlift on a single leg to table top arabesque and up to parallel retire
  - * Tendu to Fondu with Rotation to make Triplanar: so front, side, back with a twist towards the back leg, but stay lifted on the standing leg to eliminate shear over the hip joint

- **Pool**
  - Freestyle swimming only kicking every fourth lap

- Pool Barre with same Precautions as above

DANCE TECHNIQUE: BARRE

- **Pliés** (CKC squats) All positions and with grande plié only in 1st and 2nd
- **Tendus en croix from first position and fifth position** – Turnout with derriere. No more than 15 each way or to tolerance. Encourage lots of brushing the foot along the floor to decrease overuse of hip flexor
- **Ronde De Jambe** - Complete motion. May start Ronde de Jambe en l'air.
- **Fondu en croix from fifth position** - No more than two sets en croix. Watch for anterior pelvic tilt, and encourage increased quad use to assist with lengthening the leg and decreasing the pull on the hip flexor
- **Frappée en croix from fifth position** - No more than two sets en croix. Watch for increased pelvic motion to compensate for lack of hip flexion strength on surgical side
- **Grande Battement en croix from fifth position**- No more than two sets en croix. Legs remain in the 90° range all directions
- **Relevés** – No more than 20 in first position with equal weight distribution and correct alignment. May add these into combination as long as they are not fast

DANCE TECHNIQUE: CENTRE (same precautions as above)

- Pliés
- Tendus
- Dégagés
- Ronde de Jambes
- Fondus
- **Across the Floor**
  - Waltz turns
  - Balance
  - Cross Ball Change
  - Pas de Bourree
  - Pirouettes in Combination (tombé pas de bourrée, but only ¼ to ½ NO full turns yet)

MODALITIES

- Ice/Heat PRN
- Stim as needed for muscle activation or pain control

- Compression Boots

PHASE SIX

5-7 Months Post Op

PRECAUTIONS

No resisted hip flexion: Ask your surgeon as some desire no resisted hip flexion during the entire rehabilitation process.

Dance Technique

- Complete carre with grande plié in all positions.
- Begin **gentle** adagio with legs to 45° **only**.
- Start with relevés en pointe no more than 20 in first position
- Legs turn out for any derriere exercises
- Relevé in combination is okay
- No legs over 60°
- Limited Jumping **at 7 months**, No Repetitive Turning, Limited Pointe Work **after 6 months**
- Watch for increased anterior pelvic tilt and correct to neutral spine
- Watch for appropriate LE mechanics and placement
- Limit Reps to no more than 20 of any direction
- Limit centre work to tendus, dégagés, fondus, ronde de jambes, across the floor, pirouettes in combination (no more than 8 reps)
- Look at petite allégro but watch landings so there is no valgus present with all landing mechanics. Start in the pool if able; otherwise at the barre to assist with appropriate landing mechanics. Valgus increases shear on the labrum *Becker, PAMA presentation 2013.*

GOALS

General

Safe, gradual, and effective return to 80- 90% of previous activity level

SUGGESTED PHYSICAL THERAPY INTERVENTIONS

MANUAL THERAPY

- **Grade II Joint Mobilizations** of the hip, lumbar spine PRN
- Continue with more aggressive **PROM/ Stretching** for all motions PRN and within pain tolerance of patient

EXERCISE

- **Cardio**
    - Increase biking duration and intensity (resistance, speed) to tolerance
    - If Hip Flexors are still grumpy focus on dance conditioning, Pilates, Pool, or Yoga as listed previously

- **Table/HEP**
    - Start Split work
        - Hamstring stretch
        - Pigeon stretch
        - Foam roller hip flexor stretch
        - Nerve glides seated
        - Side split stretch
        - Kneeling side leg stretch
    - Triplanar work is key at this phase (think Y-balance with rotation to back leg with back leg work): any exercise where you can add in a safe rotation to help with jumping and landing progressions is beneficial

- **Dance Conditioning and weight lifting as prior**
    - Rotation Discs
    - Technique work to stabilize pelvis and look for valgus

- **Pilates as before**
    - Add in chair work/cadillac if you have it

- **Pool**
    - Freestyle swimming only kicking every fourth lap
    - Pool Barre - no precautions
    - Jumping added

- **Gryokinesis** can be initiated if available. This is later due to the amount of rotation on a stable pelvis that is flexed at 90/90. Need to make sure dancer does not shear hip with movement.

DANCE TECHNIQUE: BARRE

- **Pliés** (CKC squats) - All positions including grande plié in all positions.

- **Tendus en croix from first position and fifth position** - Turnout with derriere. No more than 15 each way or to tolerance. Encourage lots of brushing the foot along the floor to decrease overuse of hip flexor

- **Ronde De Jambe** - Complete motion. May start Ronde de Jambe en l'air at 60°.

- **Fondue en croix from fifth position** - No more than two sets en croix. Watch for anterior pelvic tilt, and encourage increased quad use to assist with lengthening the leg and decreasing the pull on the hip flexor

- **Frappe en croix from fifth position** - No more than two sets en croix. Watch for increased pelvic motion to compensate for lack of hip flexion strength on surgical side

- **Adagio en croix from fifth -** No higher than 60° and limit to one rep en croix

- **Grande Battement en croix from fifth position** - No more than two sets en croix. Legs remain in the 100° range all directions

- **Relevés** – No more than 40 in first position with equal weight distribution and correct alignment. May add these into combination as long as they are not fast

- **Jumping in first, second at the Barre**-Limit to no more than 8 each position. **At 7 months**

- **Pointe Work at the Barre**- No more than 20 relevés in first**. After 6 months**

DANCE TECHNIQUE: CENTRE (same precautions as above)

- Pliés
- Tendus
- Dégagés
- Ronde de Jambes
- Fondus
- Across the Floor
    - Pirouettes in Combination
    - Chaînés
    - Piqué Turns
    - Petite allégro- first, second position jumps. Sauté across the floor, glissades, assemblés, jetés- only if proper mechanics and at the end of 7 months

MODALITIES

- Ice/Heat PRN
- Stim as needed for muscle activation or pain control
- Compression Boots

PHASE SEVEN

8-12 Months Post-Op

PRECAUTIONS

No resisted hip flexion: Ask your surgeon as some desire no resisted hip flexion during the entire rehabilitation process.

Dance Technique

- Complete barre including grande plié. Pointe work at barre, progressing to centre by a year as technique allows
- Legs may begin to go past 90°
- Jumping, Repetitive Turning, Pointe Work may progress per technical ability
    - Watch for increased anterior pelvic tilt and correct to neutral spine
    - Watch for appropriate LE mechanics and placement
- Centre work full as long as pain tolerance and technique permit
- Keep legs out of valgus and allow for jumps - pas de chat, tour jeté, jumped fouetté, c- jumps, calypso, etc; less than full extension until 11 months
- Gradual progression to full extension by 12 months
- Tours, Fouettés should be limited to 12 reps and gradually increased over the year mark

GOALS

General

Safe, gradual, and effective return to 100% of previous activity level

SUGGESTED PHYSICAL THERAPY INTERVENTIONS

Periodic visits may be needed to assess for tissue response to extreme end ranges of motion and technical progression. Labrum approximates with flexion and end ranges of motion. Watch for pain with progression

Exercise

- **Cardio**
    - Full Return to Dance plus weight lifting, dance conditioning, or other recovery techniques as listed previously

- **Plyometric work**
    - Box Jumps
    - Single leg hop
    - Triple hop
    - Weighted opposite hand as leg single leg jumps
    - Weighted bar overhead with deadlift to squat to jump
    - Direction Changing jumps from one leg to one leg front to back, side to side, and rotational
    - Single leg side to side jumps

DANCE TECHNIQUE: BARRE

- **Pliés** (CKC squats) - All positions including grande plié in all positions.
- **Tendus en croix from first position and fifth position** - Turnout with derriere.
- **Ronde De Jambe** - Complete motion. Ronde de Jambe en l'air at 60-90°
- **Fondue en croix from fifth position** - Watch for anterior pelvic tilt, and encourage increased quad use to assist with lengthening the leg and decreasing the pull on the hip flexor
- **Frappe en croix from fifth position** - Watch for increased pelvic motion to compensate for lack of hip flexion strength on surgical side
- **Adagio en croix from fifth -** As Tolerated as long as there is no complaint of anterior hip pain
- **Grande Battement en croix from fifth position** - As Tolerated as long as there is no complaint of anterior hip pain
- **Relevés** - With equal weight distribution and correct alignment. May add these into combination
- **Jumping -** As tolerated but with correct mechanics and no LE Valgus
- **Pointe Work at the Barre** - As technique allows
    - ■

DANCE TECHNIQUE: CENTRE (same precautions as above)

- Gradual progression of all jumps to full extension by 12 months.
- Tours, Fouettés should be resumed to full completion by 12 months

MODALITIES

- Ice/Heat PRN
- Stim as needed for pain control or muscle activation
- Compression Boots

TO CLEAR for FULL RETURN TO DANCE:

#1 Fill out the *HYPERMOBILE (Cheer/Dance/Gymnastics) - Hip Specific Return to Sport Questionnaire*

#2 Perform the HYPERMOBILE (Cheer/Dance/Gymnastics) - Hip Specific Return to Sport Functional Testing