HIP ARTHROSCOPY
CLINICAL PRACTICE GUIDELINE

Progression is time and criterion-based, dependent on soft tissue healing, patient demographics and clinician evaluation. Contact Ohio State Sports Medicine at 614-293-2385 if questions arise.

Phase I – Initial Exercise

**Goals**
- Protect integrity of repaired tissue
- Restore ROM within restrictions
- Diminish pain and inflammation
- Prevent muscular inhibition

**ROM**
- **Passive hip circumduction** (first post-op visit until gait is normal and pain free)
  - 5 min clockwise/counterclockwise each at slight flexion (10 total min.)
  - 5 min clockwise/counterclockwise each at 30 degrees flexion (10 total min)
- “Belly time” – lie prone BID for 20 min
- Stationary bicycle with minimal to no resistance
- Aquatic ambulation-emphasize neutral ambulation to avoid capsular stretch at week 3
- Standing pendulum swings
- Active-assistive range in all directions
- Prone prop hip flexor stretch initially and progress to half kneeling hip flexor stretch at week 3
- Posterior capsule stretching-quadruped rocks

**Manual Therapy**
- Iliopsoas release

**Education**
- Use crutches and weight bearing as tolerated.
  - Move crutch(es) forward along with operated leg to help reduce stress on hip.
  - Use crutches 5 to 7 days after surgery and progress to full weight bearing without discomfort.
- “Belly Time”- Lay on your stomach twice a day for 20 minutes each time.
- 1-2 days after surgery begin with exercises (See Below).
- Apply ice to front or side of hip for 15 minutes, 3-5 times per day.
- You should be seeing a physical therapist by 5-7 days after surgery.
- Perform gluteal squeezes throughout the day.
- When sitting, try to sit with the hips at 90 degrees. Sitting with the knees closer to the chest might produce pain or pinching at the hip.

**Precautions**
- Limit prolonged standing and walking up to four weeks after surgery to avoid hip discomfort.
- Avoid deep squatting or heavy lifting up to six weeks after surgery.
- Avoid sleeping on the operated hip. Sleeping on your back or unaffected leg (with a pillow between the legs) will be more comfortable.

**Contraindications**
- DO NOT move hip in direction that causes pain, irritation or “pinching” in the hip.
- DO NOT push through pain.
- DO NOT perform sit-ups or sit-up like motion.
- DO NOT perform the elliptical machine or impact activities, such as running, without clearance from your physician or physical therapist.
- DO NOT perform straight leg raises

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Starting 1-2 Days After Surgery

- All exercises should be performed pain free. If painful, contact your physician or physical therapist.
- Please perform exercises 5 days per week that you are not in physical therapy.
- Perform the following exercises until you are off crutches and walking pain-free.

**Isometric Gluteal Exercises**
- Squeeze buttock muscles.
- Hold for 5 seconds, repeat 20 times, and perform 3 times per day.

**Isometric Quadriceps**
- Lying on back or sitting up with legs straight out in front, straighten knee down into supporting surface.
- Hold for 5 seconds, repeat 20 times, and perform each exercise 3 times per day.

**Isometric Hamstrings**
- Bend knee and dig heel into the floor or surface.
- Hold for 5 seconds, repeat 20 times, and perform each exercise 3 times per day.

**Isometric External Rotation**
- During “belly time,” bend both knees up with pillow or rolled towel between feet and squeeze feet together.
- Hold for 5 seconds, repeat 20 times, and perform each exercise 3 times per day.

**Isometric Internal Rotation**
- During “belly time,” bend both knees up, with resistance band or belt placed around ankles. Begin to separate feet. Belt or band will provide resistance and not allow for movement to occur.
- Hold for 5 seconds, repeat 20 times, and perform each exercise 3 times per day.

**Ankle Pumps**
- Bring toes up and then point them down.
- Repeat 30 times, 3 times per day.

**Self Standing Hip Circumduction**
- Standing supported on non-operative leg on stair or stool (4-8 inches off the ground) allow opposite leg to remain off stool and slowly move leg in circular, pendulum type motion.
- Perform 20 circles clockwise and counterclockwise each, 3 times per day.
<table>
<thead>
<tr>
<th>Exercise</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat and Camel</td>
<td>Positioned on all fours, lower stomach and roll hips forward then roll hips backward and arch back up. Repeat 10 times, 3 times per day.</td>
</tr>
<tr>
<td>Abdominal Isometrics</td>
<td>Draw in stomach down towards spine and up towards the lower ribs. Be sure that there is no movement occurring through the hips with this particular exercise. Hold for 5 seconds; repeat 10 times, 3 times per day.</td>
</tr>
<tr>
<td>Posterior Pelvic Tilts</td>
<td>Draw in stomach as instructed above and roll hips back until lower back is flat on supporting surface. Hold for 5 seconds; repeat 10 times, 3 times per day.</td>
</tr>
<tr>
<td>Terminal Knee Extension in Prone</td>
<td>During “belly time,” position foot on toes, as shown in picture, or use a rolled up towel under the shin (see picture for placement) and straighten knee. Hold for 5 seconds; repeat 10 times, 3 times per day.</td>
</tr>
<tr>
<td>Passive Hip Circumduction</td>
<td>Lie on your back and have partner support leg with knee straight and hip slightly bent, AVOID ANY PINCHING, and move leg in circles, both clockwise and counterclockwise. Perform each direction for 5 minutes, 2 times per day for 20 minutes total.</td>
</tr>
<tr>
<td>Soft Tissue Mobilization</td>
<td>Proximal and distal ITB. Perform for 8-10 minutes.</td>
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</tbody>
</table>
**1 Week After Surgery**

- Once approved by your physical therapist, perform stationary bike 10-20 minutes per day *(no resistance, no recumbent bike and no use of foot straps on the pedals).* Raise seat height to a comfortable position to avoid hip pain or discomfort.
- Add the following exercises in addition to the exercises prescribed above.

<table>
<thead>
<tr>
<th>Exercise</th>
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<tbody>
<tr>
<td>Rocking on All Fours</td>
<td>Position yourself on your hands and knees and shift your weight forward through your arms and then back through your knees as tolerated. Perform 10 repetitions, 2-3 sets, 3 times per day.</td>
</tr>
<tr>
<td>Isometric Hip Abduction</td>
<td>With resistance band or belt around knees, attempt to separate knees without movement occurring. Hold 5 seconds; repeat 10 times, 3 times per day.</td>
</tr>
<tr>
<td>Isometric Hip Adduction</td>
<td>Place pillow between knees and squeeze together. Hold 5 seconds; repeat 10 times, 3 times per day.</td>
</tr>
<tr>
<td>Double Leg Bridges</td>
<td>Squeeze buttocks and lift waist up off of supporting surface. Once you have reached position as in picture, slowly lower down to table and repeat. Repeat 10 times, 3 times per day.</td>
</tr>
<tr>
<td>Standing Heel Raises</td>
<td>Lift heels off floor and rise up onto toes. Repeat 30 times, 3 times per day.</td>
</tr>
<tr>
<td>Exercise</td>
<td>Description</td>
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<td>--------------------------------</td>
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</tr>
<tr>
<td>Single Limb Balance</td>
<td>Stand on one foot without arm support and maintain balance. Hold for 30 seconds, 3 times per day.</td>
</tr>
<tr>
<td>Supine Hip Abduction Slides</td>
<td>Lying on back, move leg to side comfortably. Repeat 10 times, 3 times per day.</td>
</tr>
<tr>
<td>Supine Heel Slides</td>
<td>Dig heel into surface, slide foot toward your buttocks comfortably and then slide leg back to straight position. Avoid any irritation or pinching at hip. Repeat 10 times, 3 times per day.</td>
</tr>
</tbody>
</table>

### 2-4 Weeks After Surgery

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Description</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prone Hip Extension</td>
<td>Lay supine, with torso prone on table/physio ball, and feet on the ground. Repeat 10 times, 3 times per day</td>
<td></td>
</tr>
<tr>
<td>Straight Leg Raise Extension</td>
<td>Repeat 10 times, 3 times per day</td>
<td></td>
</tr>
<tr>
<td>Straight Leg Raise Abduction/Adduction</td>
<td>Repeat 10 times, 3 times per day</td>
<td></td>
</tr>
<tr>
<td>Leg Press/Shuttle</td>
<td>Start with hip/knees at 90 degree flexion and push up until hips/knees are extended. Use low resistance. Repeat 10 times, 3 times per day</td>
<td></td>
</tr>
<tr>
<td>Standing Terminal Knee Extension</td>
<td>In standing position, loop band around leg behind knee. With band pulling knee into slight knee flexion-straighten knee while resisted by band.</td>
<td></td>
</tr>
<tr>
<td>Clamshells (sidelying and supine)</td>
<td>With resistance band or belt around knees, attempt to separate knees with movement occurring. Repeat until fatigue, 3 times per day.</td>
<td></td>
</tr>
</tbody>
</table>

### Criteria for Progression to Next Phase
- Decrease edema
- Minimal pain with above exercises
- Normalized gait
- ROM ≥75% of uninvolved side
- Proper muscle firing for initial exercises
## 4-6 Weeks After Surgery

### ROM
- Continue with stationary bike
- Continue with mobility exercise
- Manual Therapy (long axis distraction and A/P mobilizations)
  - Grade III multi-angle joint mobilizations with and without movement
  - Iliopsoas release

### Strengthening

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Sets and Repetitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double Leg Mini Squats</td>
<td>Perform 10 repetitions, perform 3 sets</td>
</tr>
<tr>
<td>Bridging with Swiss ball</td>
<td>Perform 10 repetitions, perform 3 sets</td>
</tr>
<tr>
<td>Side Abdominal Bridge/Plank</td>
<td>Perform until fatigue or loss of good form, perform 3 sets</td>
</tr>
<tr>
<td>Terminal Knee Extensions</td>
<td>Perform 20 repetitions, perform 3 sets</td>
</tr>
</tbody>
</table>

### Criteria for Progression to Next Phase
- Able to perform single-leg stance
- Normalized gait without assistive device
- No pain with above exercises
- Full range of motion
## Phase II – Intermediate Phase (Weeks 6-8)

<table>
<thead>
<tr>
<th>Goals</th>
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<tbody>
<tr>
<td>• Protect integrity of repaired tissue</td>
</tr>
<tr>
<td>• Restore ROM</td>
</tr>
<tr>
<td>• Progressively increase muscle strength and proprioceptive retraining</td>
</tr>
<tr>
<td>• Emphasis on rotational strength and stability</td>
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<table>
<thead>
<tr>
<th>ROM</th>
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<tbody>
<tr>
<td>• Continue with stationary bike</td>
</tr>
<tr>
<td>• Stair-climber/upright elliptical for ROM and endurance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partial Range Lunges</th>
<th>Step with involved LE and drop hips down towards ground, keeping knee from coming forward over toes.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Single Leg Balance on Unstable Surfaces</th>
<th>Balance on involved LE with soft knee and hips level, progress to increased difficulty on unstable surfaces</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Step Downs</th>
<th>Start on 4 inch step or box, keeping hips level, drop bottom down by b</th>
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</table>

<table>
<thead>
<tr>
<th>Single Leg Cord Rotations</th>
<th>Balance on involved LE, hips level and slight bend in knee, keeping core activated, pull band across body maintaining stability through entire motion.</th>
</tr>
</thead>
</table>
Phase III – Advanced Rehabilitation (Weeks 8-12)

Goals
- Restoration of muscular strength/endurance
- Restoration of cardiovascular endurance
- Optimize neuromuscular control/balance/proprionception

ROM
- Continue with above and stretching

Strengthening
- Progress single limb balance on unstable balance
- Progression of LE and trunk strengthening on stable to unstable surface (include rotational components)

Squat Progression
Chops and Lifts (Half Kneeling, Tall Kneeling, Lunge)
- Landing mechanics with emphasis on proper alignment
  - NO KNEE VALGUS
  - Soft, quiet landings with equal distribution of force through ankle, knee, and hip.
- Sport cord jogging
- Begin with shuttle plyometrics
  - Progress bilateral to single LE
  - Progress straight plane to rotational component
- Initiate walking-jogging progression
- Swimming (Avoid rotational kicks)

Criteria for Progression to Next Phase
- Plyometrics without exacerbation of symptoms

Mini Squats on BOSU
- Stand with legs shoulder width apart and balanced on BOSU, drop back into a small squat.

Side Shuffles with Resistance Band
- Improve functional strength and endurance without exacerbation of symptoms
- Full pain-free ROM
- Hip flexion strength >60% of uninvolved
- Hip add, abd, ext, IR, ER strength >70% of uninvolved
Weeks 12-18

<table>
<thead>
<tr>
<th>ROM</th>
<th>• Continue per tolerance and pre-exercise warm-up</th>
</tr>
</thead>
</table>
| Strengthening| • Continued neuromuscular strengthening with emphasis on hip and pelvic stability  
               • Continue jogging progression  
               • FWB plyometrics  
               • Begin multi-directional agility drills and sport specific drills |
| Criteria for Progression to Next Phase | • Ability to perform sport-specific drills at moderate speed without pain  
                                             • Hip flexion strength >70% of uninvolved  
                                             • Hip abd, add, ext. IR, ER strength >80% of uninvolved  
                                             • Complete functional sport test  
                                             o 3 cross-over hop test for distance (within 15% of uninvolved limb)  
                                             • Demonstrate initial agility drills with proper technique |

3-6 Months

| Sport-Specific Training | • Sport specific drills  
                          • Caircoas, Z-cuts, W-cuts, etc.  
                          • Functional Testing |
|-------------------------|--------------------------------------------------|
| Criteria for Full Return to Sport | • Physician clearance at last check-up  
                                         • Hip strength >85% compared to uninvolved  
                                         • **Passing score on Functional Movement Screen**  
                                         • Demonstrate significant change with outcome questionnaire  
                                         • Ability to perform sport-specific drills at maximum speed without pain |

References


