

## **HIP ARTHROSCOPY - REHABILITATION PROTOCOL**

Hip arthroscopy is performed through small incisions using a camera to visualize the inside of the hip joint. Through several small incisions (about 1 centimeter each), your surgeon will insert a camera into one incision, and small instruments through the other incisions.

### **What is the benefit of hip arthroscopy compared to open surgery?**

Hip arthroscopy is much less invasive than traditional surgery. This means:

- Early rehab
- Accelerated rehab course outpatient procedure
- Smaller incisions
- Early return to sports and activities

### **What conditions can be treated with hip arthroscopy?**

#### **Femoral Acetabular Impingement (FAI)**

The junction of the femoral head can be overgrown with bone which may cause impingement with the acetabulum, giving you pain and a clicking sensation (CAM effect). The edge of the acetabulum may also become overgrown with bone and cause impingement and pain (Pincer effect). Patients with FAI are more likely to experience loose bodies, labral tears, snapping hip syndrome, and arthritis.

#### **Labral Tears**

The labrum is a piece of cartilage that lines and reinforces a ball-and-socket joint, like the hip joint. A labral tear occurs when a piece of the labrum cartilage becomes pinched between the femoral head and the acetabulum, causing pain and catching sensations. Hip labral tears can result from either degeneration (wear-and-tear) or anatomical abnormalities. Hip labral tears usually affect active adults between the ages of 20 to 40.

#### **Loose Bodies**

Loose bodies are pieces of cartilage that are torn within the joint. They look like small marbles floating within the joint space. These loose bodies can become caught within the hip during movements. They are most often the result of sports injuries or acute traumas in young patients. In older patients, they are the result of degeneration that occurs in many types of arthritis.

#### **Snapping Hip Syndrome**

Snapping hip syndrome has several causes, some of which can be treated with hip arthroscopy. If something is catching within the hip joint, hip arthroscopy can be used to relieve this snapping. Also, hip arthroscopy can be used to perform a psoas tendon release in cases of internal snapping hip syndrome.

## **Cartilage Damage**

In patients with focal cartilage damage (meaning NOT widespread arthritis), hip arthroscopy may be helpful. These patients may sustain an injury causing a piece of cartilage to break away from the surface of the bone. These patients may benefit from removal of that piece of cartilage.

## **Early Arthritis**

The labrum of the hip is a cuff of thick fibrocartilage tissue that surrounds the hip socket. The labrum helps to support the hip joint and provide stability. When a labral tear of the hip occurs, a piece of this tissue can become pinched in the joint causing pain and catching sensations.

This is a controversial topic, as patients who have arthritis pain generally will not benefit from a hip arthroscopy. The patients who tend to benefit have specific ending of impingement (pinching) within the hip joint, and may benefit from the removal of the bone spurs causing this impingement. This is only possible in the very early stages of arthritis, and even then may not offer relief of symptoms.

## **What are the possible complications from hip arthroscopy?**

The most concerning complications of hip arthroscopy have to do with several important nerves and blood vessels that surround the joint. Nerve injury is uncommon, but can be a significant problem. The most commonly affected nerves include the sciatic nerve, the lateral femoral cutaneous nerve (sensation to the thigh), and the pudendal nerve. Injury to any of these nerves can cause pain and other problems.

Other possible complications from hip arthroscopy include potential injury to normal structures, infection, bleeding, femoral neck fracture, femoral head dislocation, and continued pain after the surgery. The rate of these complications is low, but patients need to understand the potential prior to undergoing a hip arthroscopy.

The benefit of hip arthroscopy is that the recovery is much simpler than in traditional open hip surgery. Patients can typically put as much weight as tolerated on the hip immediately following surgery.

## **Hip Arthroscopy Rehabilitation Protocol**

In the first weeks after surgery, patients work on regaining motion around the joint and gentle strengthening exercises. Typically, patients work with a physical therapist for assistance with these exercises and stretches. Most patients can begin light activities (cycling, swimming) within a few weeks.

Athletes most often take about 12 weeks or more for recovery.

## **Immediate Postoperative Phase**

Goals: normalize gait, maintain hip flexibility

### **Postoperative Day 1**

Weight bearing: 50% on operative side with 2 crutches

Exercises:

- Hip flexibility
- Hip flexors
- Quads
- Piriformis/glutes
- Trunk flexibility
- Hamstring stretch
- Straight leg raises in supine
- Hip ABD/ADD/extension exercises
- Quad sets/glute sets
- Gait training

### **Postoperative Days 2 to 4**

Weight bearing: 50% on operative side with 2 crutches

Range of motion: Hip flexion 0 - 600

Exercises:

- Maintain hip and trunk flexibility
- Straight leg raising (all 4 directions)
- Standing weight shifts and mini squats (00 - 30)
- Continue quad sets/glute sets

### **Postoperative Days 5 to 7**

Weight bearing: 50% on operative side with 2 crutches

Range of motion: Hip flexion 0 - 800

Exercises:

- Multi-angle isometrics hip flexion/extension/ABD/ADD/IR/ER
- Straight leg raising (all 4 directions)
- Standing weight shifts and mini squats
- Knee extension 900 - 00

## **Postoperative Days 8 to 14**

Weight bearing: 50% on operative side with 2 crutches

Range of motion: Hip flexion 0 - 900

Exercises:

- Continue with previous exercises
- Standing straight leg raises (all 4 directions)
- Weight shifts and mini squats in parallel bars
- Heel raises - double leg to single leg
- Core stabilization exercises
- Double leg bridging exercises - neutral pelvis
- Transverse ABD contractions
- Stationary bike for ROM - minimal resistance
- Pool therapy - chest deep running and aqua-jogger

## **Maximum Protection Phase: Weeks 2 to 6**

Goals:

- Absolute control of external forces
- Nourish articular cartilage
- Decrease fibrosis
- Stimulate collagen healing
- Prevent muscle atrophy
- Prepare ambulation with crutches

### **Week 2: Postoperative Day 14**

Weight bearing: 50% on operative side with 2 crutches

Range of motion: Hip flexion 0 - 900

Exercises:

- Multi-angle isometrics
- Leg raises (4 planes)
- Maintain hip and trunk flexibility
- Standing weight shifts and mini squats 00 - 400 - proprioception training
- Initiate aquatic exercises for gait training

### **Postoperative Weeks 3 to 4**

Weight bearing: 100% on operative side - no crutches

Range of motion: Hip flexion 0 - 90, advance past as tolerated

Exercises:

- Same as week 2
- Bicycle for ROM stimulus and endurance
- Initiate eccentric quads
- Hip flexion ROM > 90 per tolerance
- Progress pool activities

### **Weeks 6 to 9: Controlled Ambulation Phase**

Goals:

- Control forces during walking
- Maximal strength for lower extremity

Exercises:

- Same as week 4
- Initiate swimming program
- Initiate step-ups (start with 2" and gradually increase)
- Increase closed kinetic chain rehab
- Increase proprioception training
- Passive ROM hip flex 00 - 110 (\*If labral repair performed avoid hip flexion > than 90 until week 12\*)
- Initiate walking program

### **Weeks 9 to 16: Light Activity Phase**

Goals:

- Development of strength, power, and endurance
- Begin to prepare for return to functional activities
- Enhance neuromuscular coordination and endurance

Exercises:

- Continue strengthening exercises
- Initiate plyometric program
- Initiate running program
- Initiate agility drills
- Sport-specific training and drills

Criteria to Initiate Running Program:

- Satisfactory clinical exam
- Adequate quad/hip control/strength
- Pain free plyometric drills

### **Weeks 20 to 24: Return to Activity Phase**

Goals:

- Achieve maximal strength
- Further enhance neuromuscular coordination and endurance

Exercises:

- Continue strengthening program
- Continue closed chain strengthening program
- Continue plyometric program
- Continue running and agility program
- Accelerate sport specific training and drills