



## **Cohere Medical Policy – Pediatric Arthroscopy Procedures (Hip, Knee, Shoulder)**

*Clinical Guidelines for Medical Necessity Review*

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## Guideline Information:

**Specialty Area:** Disorders of the Musculoskeletal System

**Guideline Name:** Cohere Medical Policy – Pediatric Arthroscopy Procedures (Hip, Knee, Shoulder)

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**Type:** ☐ Adult (18+ yo) | ☒ Pediatric (0-17yo)

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# Medical Necessity Criteria

## **Service: Pediatric Arthroscopy Procedures**

### **Recommended Clinical Approach**

Pediatric arthroscopy is typically indicated for traumatic injuries to the large joints—knee, hip, and shoulder. Special considerations are necessary around surgical timing and the remaining skeletal growth as patients may have open physis. Therefore, there is a need for a separate pediatric policy.

### **Medical Necessity Criteria**

#### **Indications**

→ **Pediatric arthroscopy procedures** are considered appropriate if **ANY** of the following is **TRUE**:

- ◆ The procedure is pediatric knee arthroscopy, and **ANY** of the following is **TRUE**:
  - The patient has an anterior cruciate ligament (ACL) tear, and **ALL** of the following are **TRUE**<sup>1-3</sup>:
    - Plain radiographs (AP, lateral, and intercondylar tunnel radiographs) are negative for fracture unless this is associated with ACL injury, such as tibial eminence, Segond, or femoral condyle and posterior tibial plateau fracture due to pivot impaction; **AND**
    - Advanced imaging shows an acute anterior cruciate ligament (ACL) tear; **OR**
  - The patient has juvenile osteochondritis dissecans (OCD) lesions, and **ALL** of the following are **TRUE**<sup>4-8</sup>:
    - Advanced imaging shows an OCD lesion with breached or fissured articular cartilage, increased T2 signal indicating an unstable lesion, osteochondral fragments, loose bodies, or subchondral cysts; **AND**
    - The patient is symptomatic with **ANY** of the following:
      - ◆ Knee effusion; **OR**
      - ◆ Decreased knee extension; **OR**
      - ◆ Antalgic gait; **OR**
  - The patient requires meniscus surgery (debridement or repair) when **ANY** of the following is **TRUE**<sup>9-13</sup>:

- Discoid meniscus when **ALL** of the following are **TRUE**:
  - ◆ Advanced imaging shows discoid meniscus; **AND**
  - ◆ The patient is symptomatic from the discoid meniscus with knee pain, popping, or lack of knee extension; **OR**
- Advanced imaging shows partial or complete meniscus tear, acute or chronic; **OR**
- ◆ The procedure is hip arthroscopy, and **ALL** of the following are **TRUE**<sup>14-16</sup>:
  - Documented imaging findings, including **ANY** of the following:
    - Routine radiographs for bony pathology (fracture)
    - Advanced Imaging (eg, computerized tomography [CT] scan and/or MRI) for soft tissue pathology (eg, meniscus tear, ACL tear, rotator cuff tear) with radiology report; **AND**
  - **ANY** of the following:
    - Failure of conservative management for greater than 3 months, including **ALL** of the following:
      - ◆ Oral steroids, anti-inflammatory medications, or analgesics; **AND**
      - ◆ Physical therapy with home exercise program; **AND**
      - ◆ Ambulatory assistive device if medically appropriate; **AND**
      - ◆ Modification of pain-inducing activities; **OR**
    - Conservative treatment is not required if the patient has **ANY** of the following:
      - ◆ Active infection or acute trauma with functional loss (effusion, focal tenderness, inability to bear weight, symptoms explained by radiographic findings (e.g., fracture, soft tissue injury); **OR**
      - ◆ A visual deformity (e.g., dislocation, loose body); **AND**
  - The patient requires evaluation or treatment of **ANY** of the following:
    - Articular surface or osteochondral disorders; **OR**
    - Acute trauma (e.g., dislocation); **OR**
    - Intra-articular loose body; **OR**

- Labral reconstruction with an allograft or autograft; **OR**
- Labral tears; **OR**
- Lavage for intra-articular infections; **OR**
- Ligamentum teres injury; **OR**
- Pathological synovial disease (e.g., synovectomy); **OR**
- Extra-articular trauma, such as proximal hamstring tear, partial or full thickness; **OR**
- Femoroacetabular impingement (FAI) syndrome along with associated cartilage and/or labral injury, and **ALL** of the following:
  - ◆ Absence of advanced osteoarthritis (Tonnis grade 2 or 3); **AND**
  - ◆ Moderate to severe persistent hip or groin pain that limits activity and is worsened by flexion activities (eg, squatting or prolonged sitting); **AND**
  - ◆ Positive impingement sign with pain while the hip is flexed to 90 degrees, adducted, and internally rotated; **AND**
  - ◆ Radiographic confirmation (CT, MRI, or X-rays) of FAI with evidence of cam impingement (alpha angle greater than 50 degrees), pincer impingement (coxa profunda or acetabular retroversion), or both; **OR**
- ◆ The procedure is shoulder arthroscopy, and **ANY** of the following is **TRUE**<sup>17-20</sup>:
  - Advanced imaging shows **ANY** of the following is **TRUE**:
    - Labral tear, acute or chronic; **OR**
    - Rotator cuff tear, acute or chronic; **OR**
  - Capsulorrhaphy/labral repair for shoulder instability is considered appropriate if **ALL** of the following are **TRUE**:
    - Documented history of traumatic or atraumatic shoulder instability/laxity (e.g. dislocation, subluxation); **AND**
    - Advanced diagnostic imaging (e.g., MRI, CT) demonstrates **ANY** of the following findings that are consistent with instability:
      - ◆ ALPSA lesion; **OR**

- ◆ Bankart lesion; **OR**
- ◆ Capsular tear; **OR**
- ◆ GLAD lesion; **OR**
- ◆ HAGL lesion; **OR**
- ◆ Patulous/redundant capsule; **OR**
- ◆ Reverse Bankart lesion; **OR**
- ◆ Hill Sachs lesion; **OR**
- ◆ Reverse Hill Sachs lesion; **OR**
- ◆ Glenoid fracture.

### Non-Indications

→ **Pediatric arthroscopy procedures** are not considered appropriate if **ANY** of the following is **TRUE**:

- ◆ None.

### Level of Care Criteria

Inpatient or Outpatient

### Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
23929	Unlisted procedure, shoulder
27299	Unlisted procedure, pelvis or hip joint
27412	Autologous chondrocyte implantation, knee
27599	Unlisted procedure, femur or knee
29805	Diagnostic examination of shoulder using an endoscope
29806	Arthroscopy, shoulder, surgical; capsulorrhaphy
29807	Surgical arthroscopy of shoulder with repair of SLAP lesion
29819	Removal of loose or foreign body of shoulder using an endoscope
29820	Arthroscopy, shoulder, surgical; synovectomy, partial

29821	Arthroscopy, shoulder, surgical; synovectomy, complete
29822	Surgical arthroscopy of shoulder with debridement Surgical arthroscopy of shoulder with limited debridement
29823	Surgical arthroscopy of shoulder with debridement Surgical arthroscopy of shoulder with extensive debridement
29824	Surgical arthroscopy of shoulder with distal claviclectomy
29825	Surgical arthroscopy of shoulder with lysis and resection of adhesions Surgical arthroscopy of shoulder with lysis and resection of adhesions with manipulation
29826	Arthroscopy, shoulder, surgical; decompression of subacromial space with partial acromioplasty, with coracoacromial ligament (ie, arch) release, when performed (List separately in addition to code for primary procedure)
29827	Surgical arthroscopy of shoulder with repair of rotator cuff
29828	Surgical arthroscopy of shoulder with biceps tenodesis
29850	Arthroscopically aided treatment of intercondylar spine(s) and/or tuberosity fracture(s) of the knee, with or without manipulation; without internal or external fixation (includes arthroscopy)
29851	Arthroscopically aided treatment of intercondylar spine(s) and/or tuberosity fracture(s) of the knee, with or without manipulation; with internal or external fixation (includes arthroscopy)
29855	Arthroscopically aided treatment of tibial fracture, proximal (plateau); unicondylar, includes internal fixation, when performed (includes arthroscopy)



29856	Arthroscopically aided treatment of tibial fracture, proximal (plateau); bicondylar, includes internal fixation, when performed (includes arthroscopy)
29860	Diagnostic arthroscopy of hip joint; Diagnostic arthroscopy of hip joint with synovial biopsy
29861	Surgical arthroscopy of hip with removal of foreign body; Surgical arthroscopy of hip with removal of loose body
29862	Surgical arthroscopy of hip with debridement of articular cartilage; Surgical arthroscopy of hip with debridement of articular cartilage, abrasion arthroplasty, and resection of labrum; Surgical arthroscopy of hip with debridement of articular cartilage, and abrasion arthroplasty; Surgical arthroscopy of hip with shaving of articular cartilage, abrasion arthroplasty, and resection of labrum
29863	Surgical arthroscopy of hip with synovectomy
29866	Arthroscopy, knee, surgical; osteochondral autograft(s) (e.g., mosaicplasty) (includes harvesting of autograft[s])
29867	Arthroscopy, knee, surgical; osteochondral allograft (e.g., mosaicplasty)
29868	Arthroscopy, knee, surgical; meniscal transplantation (includes arthrotomy for meniscal insertion), medial or lateral
29870	Arthroscopy, knee, diagnostic, with or without synovial biopsy (separate procedure)
29871	Arthroscopy, knee, surgical; for infection, lavage and drainage
29873	Arthroscopy, knee, surgical; with lateral release
29874	Arthroscopy, knee, surgical; for removal of loose

	body or foreign body (e.g., osteochondritis dissecans fragmentation, chondral fragmentation)
29875	Arthroscopy, knee, surgical; synovectomy, limited (e.g., plica or shelf resection) (separate procedure)
29876	Arthroscopy, knee, surgical; synovectomy, major, 2 or more compartments (e.g., medial or lateral)
29877	Arthroscopy, knee, surgical; debridement/shaving of articular cartilage (chondroplasty)
29879	Arthroscopy, knee, surgical; abrasion arthroplasty (includes chondroplasty where necessary) or multiple drilling or microfracture
29880	Arthroscopy, knee, surgical; with meniscectomy (medial AND lateral, including any meniscal shaving) including debridement/shaving of articular cartilage (chondroplasty), same or separate compartment(s), when performed
29881	Arthroscopy, knee, surgical; with meniscectomy (medial OR lateral, including any meniscal shaving) including debridement/shaving of articular cartilage (chondroplasty), same or separate compartment(s), when performed
29882	Arthroscopy, knee, surgical; with meniscus repair (medial OR lateral)
29883	Arthroscopy, knee, surgical; with meniscus repair (medial AND lateral)
29884	Arthroscopy, knee, surgical; with lysis of adhesions, with or without manipulation (separate procedure)
29885	Arthroscopy, knee, surgical; drilling for osteochondritis dissecans with bone grafting, with or without internal fixation (including debridement of base of lesion)
29886	Arthroscopy, knee, surgical; drilling for intact osteochondritis dissecans lesion
29887	Arthroscopy, knee, surgical; drilling for intact osteochondritis dissecans lesion with internal

	fixation
29888	Arthroscopically aided anterior cruciate ligament repair/augmentation or reconstruction
29889	Arthroscopically aided posterior cruciate ligament repair/augmentation or reconstruction
29914	Surgical arthroscopy of hip with femoroplasty; Surgical arthroscopy of hip with femoroplasty for cam lesion
29915	Surgical arthroscopy of hip with acetabuloplasty; Surgical arthroscopy of hip with acetabuloplasty for pincer lesion
29916	Surgical arthroscopy of hip with labral repair
29999	Unlisted arthroscopic procedure
C9781	Arthroscopy, shoulder, surgical; with implantation of subacromial spacer (e.g., balloon), includes debridement (e.g., limited or extensive), subacromial decompression, acromioplasty, and biceps tenodesis when performed
J7330	Cultured chondrocytes implant
S2112	Knee arthroscopy harvest
S2300	Arthroscopy, shoulder, surgical; with thermally-induced Not Covered capsulorrhaphy

# Medical Evidence

Cancino et al. (2022) discuss treatment for anterior cruciate ligament (ACL) injuries in skeletally immature patients. Knee injuries are common in high school athletes, approximately 25% of them are ACL injuries. The overall rate of injury of 6.5 injuries per 100,000 athletes in the United States. Conservative treatment is not recommended in most cases as several studies report that delayed surgical stabilization of the knee can result in additional meniscus injury and articular damage. Early stabilization reduces laxity/instability and allows return to activity/sports.

Kocher et al. (2017) discuss management of discoid meniscus in children. Discoid menisci are a congenital variant and are prone to tearing and instability. Patients usually present with symptoms of knee pain, popping, clunking and lack of full knee extension. MRI is important for both diagnosis as well as understanding the morphology. Symptomatic discoid menisci should be managed with arthroscopic saucerization.

Nanmour et al. (2024) reported on evidence-based treatment for Osteochondritis Dessecans (OCD) lesions of the knee. Juvenile OCD prevalence is approximately 15 per 100,000, most commonly occurring between 12 to 16 years of age. The most common location is the medial femoral condyle. Stable OCD lesions can present with aching knee pain, while unstable OCD lesions present with a knee effusion and antalgic gait. Arthroscopic surgical management is the preferred treatment for unstable lesions.

Awad et al. (2019) evaluated literature to identify the indications for pediatric hip arthroscopy. They determined that arthroscopy has favorable outcomes with the following indications: femoroacetabular impingement, labral tear, cartilage lesions due to developmental hip dysplasia, septic arthritis, traumatic hip dislocation and loose bodies.

Imam et al. (2023) determined that pediatric shoulder arthroscopy is effective for treatment of shoulder instability, obstetric brachial plexus palsy, and partial traumatic rotator cuff tears. These procedures resulted in good outcomes with limited complications.

Hughes et al. (2018) performed a retrospective clinical review on adolescents with shoulder instability who underwent a remplissage procedure. Remplissage may be superior to Bankart repair for adolescents with anterior shoulder instability due to a Hill-Sachs deformity.

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