

Evolent Clinical Guideline 1770 for Shoulder Arthroscopy

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STATEMENT

General Information

- *It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

Purpose

This guideline addresses elective, non-emergent, arthroscopic shoulder repair procedures, including Rotator Cuff Repair, Labral Repairs, Lysis of Adhesions (Capsulotomy), Distal Clavicle Excision (DCE), Long Head Biceps (LHB) Tenotomy or Tenodesis, Loose body removal, Synovectomy, and Subacromial Decompression (SAD).

Scope

Surgical indications are based on relevant subjective clinical symptoms, objective physical exam & radiologic findings, and response to previous non-operative treatments when medically appropriate.

Open, non-arthroplasty shoulder repair surgeries are performed as dictated by the type and severity of injury and/or disease.

Special Note

In order for surgeries to be considered medically necessary there must be clear medical records that demonstrate a clear surgical plan that matches the request for surgery.

GENERAL REQUIREMENTS

Elective surgery of the shoulder may be considered if the following general criteria are met:

- Clinical correlation of individual's subjective complaints with objective exam findings and/or imaging (when applicable)
- Individual has limited function (age-appropriate activities of daily living (ADLs), occupational, or athletic)
- Individual is medically stable and optimized for surgery, and any treatable comorbidities are adequately medically managed such as diabetes, nicotine addiction, or an excessively high BMI. There should also be a shared decision between the patient and physician to proceed with shoulder surgery when comorbidities exist as it pertains to the

increased risk of complications.

- Individual does not have an active local or systemic infection
- Individual does not have active, untreated drug dependency (including but not limited to narcotics, opioids, muscle relaxants) unless engaged in a treatment program
- A smoking cessation program is highly recommended for all actively smoking patients ^(1,2)

Clinical notes should address:

- Symptom onset, duration, and severity
- Loss of function and/or limitations
- Type and duration of non-operative management modalities (where applicable)

Non-operative management, when required, will be specified within the clinical indications below and may include one or more of the following:

- Physical therapy or properly instructed home exercise program
- Rest or activity modification
- Application of heat or ice
- Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
- Single injection of corticosteroid and local anesthetic into subacromial, intra-articular space, or bicipital groove

INDICATIONS

Diagnostic Shoulder Arthroscopy

Diagnostic arthroscopy is considered medically necessary when the following criteria in either section have been met ^(3,4):

- **Section One**
 - For the evaluation of a painful total shoulder arthroplasty
- **Section Two**
 - Severe, disabling pain and/or a documented loss of shoulder function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
 - Individual demonstrates **any** of the following abnormal, shoulder physical examination findings, as compared to the non-involved side:
 - Functionally limited range of motion (active or passive)
 - Measurable loss in strength
 - Positive impingement signs

- Individual has undergone an appropriate radiographic work-up that includes both routine x-rays and a magnetic resonance image (MRI) evaluation which are determined to be inconclusive for a specific diagnosis
- Other potential diagnostic conditions have been excluded, including, but not limited to, fracture, thoracic outlet syndrome, brachial plexus disorders, referred neck pain and arthritis
- Failure of non-surgical management for at least 12 weeks duration to include **TWO** of the following:
 - Rest or activity modifications/limitations
 - Ice/heat
 - Use of a sling/immobilizer/brace
 - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics, tramadol
 - Physical therapy modalities
 - Supervised home exercise program

NOTE: In-office diagnostic arthroscopy (e.g., Mi-Eye, VisionScope) ⁽⁵⁾ is not managed by Evolent.

Rotator Cuff Repair (RCR)

Surgical treatment of a rotator cuff tear (RCT) should only be performed when there is a clinical correlation of symptoms, clinical exam findings, imaging, and failed non-operative management. ^(6,7)

NOTE: There is a separate section for subscapularis tears

Partial-Thickness Rotator Cuff Tear or Calcific Tendinitis

Surgical repair of a partially torn rotator cuff or excision of an area of calcific tendinopathy may be necessary when **all** the following criteria are met ⁽⁸⁾:

- Reproducible rotator cuff pain patterns (lateral arm, deltoid pain rarely radiating past the elbow, night pain, or pain with overhead motions)
- Functional loss (age-appropriate activities of daily living (ADL), occupational, or athletic)
- Positive impingement signs and/or tests on exam (Hawkins, Neer, Jobe test or reproducible pain when arm is positioned overhead (above plane of shoulder) with relief of pain when arm is repositioned below the plane of the shoulder) ⁽⁹⁾
- MRI or ultrasound (US) (if an MRI cannot be performed) that demonstrates a partial thickness tear (articular-sided, concealed, or bursal-sided) or evidence of calcific tendinitis ^(10,11)
- Unless worsening symptoms develop, failure of at least 12 weeks of non-operative treatment, including at least 6 weeks of physical therapy or a properly instructed home exercise program that includes exercises for scapular dyskinesis when present **AND** one

of the following ⁽¹²⁾:

- Rest or activity modification
- Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
- No cortisone injection within 12 weeks prior to surgery ^(13–16)

NOTE: US-guided percutaneous debridement or tenotomy (e.g., Tenex, TenJet) is not managed by Evolent

Small (< 1 cm), Full-Thickness Rotator Cuff Tear

Surgical repair of a small full-thickness rotator cuff tear may be necessary when **all** the following criteria are met ⁽⁸⁾:

- Reproducible rotator cuff pain patterns (lateral arm, deltoid pain not radiating past the elbow, night pain, or pain with overhead motions)
- Functional loss (age-appropriate activities of daily living (ADLs), occupational, or athletic)
- Positive impingement signs and/or tests on exam (Hawkins, Neer, Jobe test or reproducible pain when arm is positioned overhead (above plane of shoulder) with relief of pain when arm is repositioned below the plane of the shoulder) ⁽⁹⁾
- Rotator cuff weakness or severe pain with rotator cuff testing on physical exam
- MRI or US that demonstrates a small, full thickness tear (< 1 cm) ^(10,17)
- Unless worsening symptoms develop, failure of at least 6 weeks of non-operative treatment,* including physical therapy or a properly instructed home exercise program ⁽¹²⁾ (that includes exercises for scapular dyskinesis when present) **AND** one of the following:
 - Rest or activity modification
 - Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
- No cortisone injection within 12 weeks prior to surgery ^(13–16)

***NOTE:** The requirement for conservative, non-operative treatment is waived in individuals ages < 55 with an acute traumatic tear (onset of shoulder pain attributed to a specific traumatic event with no prior history of significant shoulder pain). For ages > 55, non-operative treatment may be waived on a case-by-case basis.

Medium (1-3 cm) or Large (3-5 cm), Full-Thickness Rotator Cuff Tear

Surgical repair of a medium or large full-thickness rotator cuff tear may be necessary when the following criteria are met:

- Significant progression of a full-thickness tear on serial imaging performed at least 12 weeks apart (at least 50% increase in tear size) **OR**
- When the following criteria are met:
 - Reproducible rotator cuff pain patterns (lateral arm, deltoid pain rarely not radiating past the elbow, night pain, or pain with overhead motions) ⁽⁸⁾

- Functional loss (age-appropriate activities of daily living (ADLs), occupational or athletic) ⁽⁸⁾
- Positive impingement signs and/or tests on exam (Hawkins, Neer, Jobe, empty can or drop-arm test or reproducible pain when arm is positioned overhead (above plane of shoulder) with relief of pain when arm is repositioned below the plane of the shoulder ^(8,9)
- Rotator cuff weakness or severe pain with rotator cuff testing on physical exam ⁽⁸⁾
- MRI or US results demonstrates a medium (1-3 cm) or large (3-5 cm), full-thickness tear (tear must be a complete single tendon or greater) ^(10,17)
- MRI demonstrates no advanced fatty changes (Goutallier stage 0 (normal muscle), 1 (some fatty streaks), or 2 (less than 50% fatty degeneration or infiltration) ^(11,18) or there is a Warner classification of no or mild atrophy ^(18,19)
- No cortisone injection within 12 weeks prior to surgery ⁽¹³⁻¹⁶⁾

Massive (> 5 cm and ≥ 2 tendons involved), Full-Thickness Rotator Cuff Tear

Surgical repair of a massive torn rotator cuff **WITH OR WITHOUT** a superior capsular reconstruction may be necessary when **all** the following criteria are met ^(7,20):

- MRI or US demonstrates massive (> 5 cm and/or ≥2 tendons involved), full-thickness tears (with intact or reparable subscapularis tendon for superior capsular reconstruction) ^(10,11,17,20)
- MRI demonstrates no advanced fatty changes (Goutallier stage 0 (normal muscle), 1 (some fatty streaks), or 2 (less than 50% fatty degeneration or infiltration) ^(11,18) or there is a Warner classification of no or mild atrophy ^(18,19)
- No x-ray evidence of chronic subacromial articulation of the humeral head, defined as an acromiohumeral space less than 5 mm (Hamada grade 2)
- No advanced or severe arthritis (severe narrowing of glenohumeral space or bone-on-bone articulation, large osteophytes, subchondral sclerosis, or cysts, etc.)
- No cortisone injection within 12 weeks prior to surgery ⁽¹³⁻¹⁶⁾

NOTE: AAOS consensus guidelines state that partial repair and superior capsular reconstruction, can improve patient reported outcomes ⁽⁷⁾

Subscapularis Tears

Surgical repair of a subscapularis rotator cuff tear may be necessary when the following criteria are met ⁽²¹⁾:

- History of an acute injury or chronic complaints of anterior shoulder pain, weakness, or functional impairment
- Positive physical examination findings of subscapularis deficiency – lift-off, bear-hug, belly press test, etc.

- MRI demonstrates a significant partial thickness tear (at least 50% of tendon), full-thickness tear, or any tear associated with subluxation of the biceps tendon
- No cortisone injection within 12 weeks prior to surgery ^(13–16)

Isolated Superior Capsular Reconstruction

A Superior Capsular Reconstruction may be necessary when **all** the following criteria are met ^(20,22,23):

- MRI or US demonstrates massive (> 5 cm or ≥2 tendons), full-thickness tears with an intact or reparable subscapularis tendon
- No x-ray evidence of chronic subacromial articulation of the humeral head, defined as an acromiohumeral space less than 5 mm (Hamada grade ≤2)
- No advanced or severe arthritis (severe narrowing of glenohumeral space or bone-on-bone articulation, large osteophytes, subchondral sclerosis, or cysts, etc.)

NOTE: A Concomitant Rotator Cuff Repair is **NOT** allowable with Goutallier grade ≥3 or Warner muscle atrophy changes as noted in the previous section

Rotator Cuff Repair Revision

Surgical revision within 1 year of a previously repaired small, medium, large or massive torn rotator cuff will be reviewed on a case-by-case basis and must include an MRI (with or without arthrogram) or computed tomography (CT) arthrogram that demonstrate failure of healing (Sugaya type 4-5, see **Background**) or recurrent tear ≥12 weeks after index surgery. ^(24,25)

All RCR revision cases greater than 1 year following an initial repair must again meet indications as specified by tear size listed in the sections above for a primary repair.

Contraindications

Applies to all rotator cuff repair ⁽²⁴⁾:

- Active infection (local or remote)
- Treatment of asymptomatic, full thickness rotator cuff tear
- Active systemic bacteremia
- Deltoid or rotator cuff paralysis
- Advanced or severe arthritis (severe narrowing of glenohumeral space or bone-on-bone articulation, large osteophytes, subchondral sclerosis, or cysts, etc.)
- Any cortisone injection within 12 weeks prior to surgery ^(13–16)
- A smoking cessation program is highly recommended for all actively smoking patients ^(1,2)

Labral Repairs

Repair of Superior Labral Anterior-Posterior (SLAP) Tear

Surgical indications should be focused on clinical symptoms and failure to respond to non-operative treatments, rather than imaging (due to a higher percentage of tears being missed on images and significant over-diagnosing of tears based on imaging-alone).⁽⁶⁾

Repair (*not debridement of a SLAP lesion*) may be necessary when **all** the following criteria are met⁽²⁶⁾:

- History compatible with tear (acute onset in thrower or overhead athlete, fall, traction injury, shear injury (MVA), lifting injury)
- Pain localized to the glenohumeral joint (often only associated with certain reaching or lifting activities and at night) or painful catching/popping/locking sensations
- Inability to perform desired tasks without pain (age-appropriate ADLs, sports, or occupation)
- Age < 40; requests for SLAP repair in an individual age > 40 will be reviewed on a case-by-case basis⁽²⁷⁾
- Physical examination demonstrates findings of a SLAP tear (active compression test (O'Brien test), compression rotation test, clunk, or crank test, etc.)^(6,28)
- MRI demonstrates Type II, IV SLAP tear - see the classifications of tears below⁽²⁹⁾:
 - **Primary SLAP tear classification:**
 - I – Labral and biceps fraying, anchor intact
 - II – Labral tearing with detached biceps tendon anchor
 - III – Bucket handle tear, intact biceps tendon anchor (uncommon)
 - IV – Bucket handle tear with detached biceps tendon anchor, often seen with anterior instability and anterior labral tears
 - **Subclassification for SLAP tears:**
 - V – Type II SLAP tear with Bankart lesion/anterior shoulder instability
 - VI – Superior labral flap, intact biceps anchor
 - VII – Type II SLAP tear with extension to MGHL/IGHL and instability
 - VIII – Type II SLAP with cartilage injury at bicipital footplate
 - (Type V, VII, and VIII are variants of repairable Type II tears and would usually include additional stabilization procedures or biceps tenodesis)*
- Failure of at least 12 weeks of non-operative treatment, including activity modification/avoidance of painful activities and one of the following:
 - Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
 - Physical therapy or a properly instructed home exercise program

Contraindications ⁽²⁶⁾

- **ANY** evidence of degenerative disease upon imaging ⁽³⁰⁾
- Smoker and age > 40 ^(27,31)
- Diabetics with poor control HgBA1c > 7 ⁽³²⁾
- MRI findings attributable to normal common variants (for example, labral overhang) ⁽³⁰⁾

***NOTE:** In cases where a true SLAP tear exists, but the individual has one or more contraindications or findings at the time of surgery that indicates a repair is not feasible, a SLAP debridement (limited, extensive debridement), biceps tenotomy or tenodesis may be an alternative. In addition, for some repairable SLAP tears, biceps tenodesis is a viable alternative to repair (see Tenotomy and Tenodesis Indications). ^(29,33)

Anterior-Inferior Labral Tear (Bankart Lesion) ⁽³⁴⁾

- Bankart repair of an **acute labral tear** may be necessary when **all** the following criteria are met:
 - History of an acute event of instability (subluxation or dislocation) or acute onset of pain following activity
 - Age < 30
 - Clinical exam findings demonstrate positive apprehension test, positive relocation test, positive labral grind test, or objective laxity with pain
 - Range of motion is not limited by stiffness upon physical exam (PE is not required if there has been a recent episode of instability)
 - Labral tear/Bankart lesion on MRI or CT imaging
- Bankart repair for **recurrent instability**, with or without a Remplissage or Latarjet procedure, may be necessary when **all** the following criteria are met:
 - Recurrent instability (two or more episodes of subluxation or dislocation)
 - Physical examination findings demonstrate positive apprehension test, positive relocation test, positive labral grind test, or objective laxity with pain (PE is not required if there has been a recent episode of instability or there is a radiographic evidence of any prior dislocation)
 - Range of motion is not limited by stiffness upon physical exam (not required with a history of a recent dislocation)
 - MRI evidence of a labral tear with or without bony Bankart fracture of the glenoid. Cases with a history of frank anterior dislocations without MRI evidence of a labrum tear will be reviewed on a case-by-case basis.

Anterior-Inferior Labral Tear (Bankart Lesion) – Contraindications ⁽³⁴⁾

- Radiographic findings of an engaging Hill Sachs humeral head defect or glenoid bone loss (if surgery only includes Bankart repair). Latarjet or Remplissage procedures should be considered for anterior dislocations of the shoulder when there is evidence of an

engaging (“off-track”) Hill-Sachs lesion of the humerus (see **Background**), or if there is > 20% glenoid bone loss by x-ray, CT, or MRI ^(35–37)

- Isolated pain only (no documented recurrent instability events) in individuals over 40
- X-ray, MRI, or CT shows significant degenerative arthritis of the glenohumeral joint
- Seizure disorders, collagen disorders (e.g., Ehlers-Danlos), neurologic injuries (e.g., axillary nerve palsy), and atraumatic instability

Anterior-Inferior Labral Tear (Bankart Lesion) – Relative Contraindications ⁽³⁴⁾

- Seizure disorders ⁽³⁸⁾
- Collagen disorders (e.g., Ehlers-Danlos) ⁽³⁹⁾
- Neurologic injuries (e.g., axillary nerve palsy) ^(40,41)
- Atraumatic instability ^(42,43)

Posterior Labral Tear ^(44,45)

Surgical repair of a posterior labral tear may be necessary when **all** the following criteria are met:

- Symptoms of pain, catching/popping, or instability
- MRI findings of posterior labral tear
- Exam findings demonstrate positive load-and-shift test, jerk test, glenohumeral grind test, or objective laxity with pain or profound weakness
- Failure of at least 12 weeks of non-operative treatment (unless presenting as a traumatic tear in a competitive athlete at any level) that includes any **TWO** of the following:
 - Physical therapy or a properly instructed home exercise program
 - Rest or activity modification
 - Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
- Age < 40
- No radiographic evidence of degenerative disease (e.g., posterior glenoid cartilage loss, subchondral glenoid cysts, mucoid degeneration of labrum, narrowing of joint space with posterior humeral head subluxation on axillary x-ray or axial MRI images)

Combined Labral Tears

(E.g., Anterior / Posterior, SLAP / Anterior, SLAP / Posterior, SLAP / Ant. / Post.) ⁽⁴⁶⁾

- Surgical repair of an **acute combination tear** may be necessary when **all** the following criteria are met:

- History of an acute event of instability (subluxation or dislocation)
- Acute labral tear on MRI/CT imaging with/without bony Bankart fracture not > 25% of glenoid width upon imaging
- Age < 30
- Range of motion not limited by stiffness upon physical exam
- Clinical exam findings demonstrate positive apprehension test and positive relocation test, **OR** positive labral grind test **OR** objective laxity with pain
- Minimal to no evidence of degenerative changes on imaging
- Surgical repair of **recurrent combination tear** may be necessary when **all** the following criteria are met:
 - Recurrent instability (subluxation or dislocation) with at least 2 instability events
 - Labral tear on MRI or CT, with/without bony Bankart fracture not > 25% of glenoid width upon imaging
 - Range of motion not limited by stiffness upon physical exam
 - Clinical exam findings demonstrate positive apprehension test and positive relocation test, or positive labral grind test, or objective laxity with pain
 - Minimal to no evidence of degenerative changes on imaging

Multidirectional Instability of the Shoulder (MDI)

Open or Arthroscopic Capsulorrhaphy for MDI

Surgical repair for MDI may be necessary when **all** the following criteria are met ^(47,48):

- Individual has pain and limited function (age-appropriate ADLs, occupation, or sports)
- Individual has recurrent instability due to hyperlaxity or mobility and no traumatic dislocation
- Physical exam supports repeatable increased glenohumeral joint translation (greater than 1 cm of movement during the sulcus test)
- MRI with arthrogram confirms capsular laxity and excludes Bankart and Kim lesions (tear between posterior labrum and articular cartilage), or glenoid erosion
- Failure of at least 6 months of formal physical therapy and activity modification

Adhesive Capsulitis ^(49,50)

(Lysis of Adhesions, Capsulotomy/Capsular Release or Manipulation under Anesthesia)

Surgery for adhesive capsulitis may be necessary when **all** the following criteria are met:

- Individual has pain, loss of motion, and limited function (age-appropriate ADLs, occupation, or sports)
- Physical exam demonstrates loss of motion of at least 50% in 2 planes, as compared to the contralateral shoulder

- Co-morbidities (such as diabetes, thyroid disease, lung disease, etc.), and other causes of loss of shoulder motion have been ruled out
- Failure of at least 12 weeks of non-operative treatment that includes physical therapy or a properly instructed home exercise program and documentation of **one** of the following:
 - Minimum of 4 weeks of oral or topical NSAIDs (if not medically contraindicated)
 - Rest or activity modification
 - Heat/Ice
 - Corticosteroid injection

Distal Clavicle Excision (DCE)

Distal Clavicle Excision may be necessary when **all** the following criteria are met ^(51,52):

- Positive clinical exam findings as evidenced by pain upon palpation over AC joint and/or pain with cross-body adduction test
- Positive findings on X-ray **OR** MRI:
 - Radiographic (X-ray) demonstrates narrowed joint space, distal clavicle or medial acromial sclerosis, and/or osteophytes or cystic degeneration of distal clavicle or medial acromion correlating with the clinical findings, patient symptoms and diagnosis; **OR** MRI findings with edema in the distal clavicle and/or inflammatory change within the joint space correlating with the clinical findings, patient symptoms and diagnosis
- Failure of at least 12 weeks of non-operative treatment that includes **at least two** of the following:
 - Minimum of 4 weeks of oral or topical NSAIDs (if not medically contraindicated)
 - Rest or activity modification
 - AC joint corticosteroid injection (if DCE is to be performed as a standalone procedure, AC injection must be performed*)
 - Physical therapy or a properly instructed home exercise program

***NOTE:** If DCE is to be performed in isolation of other shoulder procedures, an AC joint injection is required for diagnostic purposes and documentation should support pain relief from injection. If no response to injection, this is a strong negative predictor to surgical outcome for isolated DCE.

Long Head Biceps (LHB) Tenotomy/Tenodesis

The indications and outcomes for tenodesis and tenotomy are the same ^(53–55) with the exception that tenodesis is typically better for more active, muscular individuals that are performing higher-demand activities for work or sport. Tenotomy is often preferred in individuals that smoke (this is a relative indication of tenotomy over tenodesis) due to healing problems in tenodesis. A primary repair of a proximal long head of the biceps tear is rare and poorly understood. ⁽⁵³⁾

Biceps tenotomy or tenodesis may be necessary when the following criteria in any of the following sections are met ^(56,57):

- **Section One**

- Any of the following:
 - When performed in conjunction with a total shoulder arthroplasty (a separate request for Shoulder Surgery - Other is required)
 - When performed in conjunction with a subscapularis tendon repair
 - Type II (or subcategories) or type IV tear, any age, in lieu of a labral repair
 - Age > 50 with SLAP tear
 - Smoker with SLAP labral tear (regardless of age, more significant with increasing age)
 - Failed SLAP repair
 - SLAP tear in diabetic or individual with loss of motion or predisposition to stiff shoulder
 - LHB hypertrophy/tearing/subluxation in association with RCR

- **Section Two**

- Patient complains of pain localized to the bicipital groove
- Physical examination findings localized to the bicipital groove (tenderness to palpation, Speed's test, etc.)
- Failure of at least 12 weeks of non-operative treatment to include **two** of the following:
 - Minimum of 4 weeks of oral or topical NSAIDs (if not medically contraindicated)
 - Rest or activity modification
 - Bicipital groove corticosteroid injection
 - Physical therapy or a properly instructed home exercise program

- **Section Three - Tenodesis for long head of the biceps tendon rupture** ^(53–55,58)

- Age < 50. Requests for tenodesis for long head of the biceps rupture in those over 50 will be reviewed on a case-by-case basis
- Patient complains of loss of strength, pain, fatigue, or concern for cosmetic deformity
- Physical examination demonstrates a complete long head of the biceps rupture (Popeye deformity, distally located biceps muscle belly, etc.)
- Unless symptoms worsen, failure of at least 6 weeks of non-operative treatment to include **two** of the following*
 - Oral or topical NSAIDS (if not medically contraindicated)
 - Rest or activity modification
 - Physical therapy or properly instructed home exercise program

***NOTE:** Request for acute tenodesis without attempts of non-operative treatment will be reviewed on a case-by-case basis

NOTE: US-guided percutaneous debridement or tenotomy (e.g., Tenex, TenJet) is not managed by Evolent

Loose Body Removal

Loose body removal may be medically necessary when the following criteria are met:

- Documentation of pain, mechanical symptoms (catching or locking), stiffness, loss of motion, feelings of instability or loss of function
- X-ray, CT, or MRI documentation of a loose body

Synovectomy

Synovectomy as an isolated procedure is usually reserved for primary synovial disease or in cases where secondary hypertrophic synovitis is documented during arthroscopy (these include adhesive capsulitis, osteoarthritis, chronic rotator cuff tear). These should be evident on arthroscopic photographs taken at surgery but may be missed on preoperative images. ⁽⁵⁹⁾

Subacromial Decompression (SAD) ^(60,61)

See **Background**

Subacromial decompression may be necessary **in conjunction with** other shoulder procedures (listed below) if there is radiographic (x-ray) evidence of mechanical outlet impingement as evidenced by a Bigliani type 3 morphology. Subacromial decompression should not be performed in isolation.

- Rotator cuff repair
- Labral repair
- Capsulorrhaphy
- Loose body removal
- Synovectomy
- Debridement
- Distal clavicle excision
- Lysis of adhesions
- Biceps tenodesis/tenotomy

Contraindications

- Type 1 or Type 2 or a thinned acromion. Subacromial bursectomy may be a reasonable option.
- If individual has received an injection in the subacromial space and there is failure to

adequately respond—significant relief (> 50%) for minimum of 1 week—to injection in the subacromial space (pain should respond temporarily if impingement)

- Prior subacromial decompression with either a Type 1 or a thinned acromion or no evidence of overhang on x-ray (unnecessary revision can thin the acromion and lead to deltoid avulsion and/or acromial fracture)
- Open SAD procedures should rarely be performed given the increased morbidity due to deltoid disruption.

CODING AND STANDARDS

Codes

CPT	
Code	Description
Shoulder Rotator Cuff Repair	
23410	Repair of ruptured musculotendinous cuff (eg, rotator cuff) open; acute
23412	Repair of ruptured musculotendinous cuff (eg, rotator cuff) open; chronic
23420	Reconstruction of complete shoulder (rotator) cuff avulsion, chronic (includes acromioplasty)
29827	Arthroscopy, shoulder, surgical; with rotator cuff repair
Shoulder Labral Repair	
23450	Capsulorrhaphy, anterior; Putti-Platt procedure or Magnuson type operation
23455	Capsulorrhaphy, anterior; with labral repair (eg, Bankart procedure)
23460	Capsulorrhaphy, anterior, any type; with bone block
23462	Capsulorrhaphy, anterior, any type; with coracoid process transfer
23465	Capsulorrhaphy, glenohumeral joint, posterior, with or without bone block
23466	Capsulorrhaphy, glenohumeral joint, any type multi-directional instability
29806	Arthroscopy, shoulder, surgical; capsulorrhaphy

CPT	
Code	Description
29807	Arthroscopy, shoulder, surgical; repair of SLAP lesion
Frozen Shoulder Repair/Adhesive Capsulitis	
29825	Arthroscopy, shoulder, surgical; with lysis and resection of adhesions, with or without manipulation
Shoulder Surgery Other	
23120	Claviculectomy; partial
23125	Claviculectomy; total
23130	Acromioplasty or acromionectomy, partial, with or without coracoacromial ligament release
23405	Tenotomy, shoulder area; single tendon
23415	Coracoacromial ligament release, with or without acromioplasty
23430	Tenodesis of long tendon of biceps
23700	Manipulation under anesthesia, shoulder joint, including application of fixation apparatus (dislocation excluded)
29805	Arthroscopy, shoulder, diagnostic, with or without synovial biopsy (separate procedure)
29819	Arthroscopy, shoulder, surgical; with removal of loose body or foreign body
29820	Arthroscopy, shoulder, surgical; synovectomy, partial
29821	Arthroscopy, shoulder, surgical; synovectomy, complete
29822	Arthroscopy, shoulder, surgical; debridement, limited, 1 or 2 discrete structures (eg, humeral bone, humeral articular cartilage, glenoid bone, glenoid articular cartilage, biceps tendon, biceps anchor complex, labrum, articular capsule, articular side of the rotator cuff, bursal side of the rotator cuff, subacromial bursa, foreign body[ies])
29823	Arthroscopy, shoulder, surgical; debridement, extensive, 3 or more discrete structures (eg, humeral bone, humeral articular cartilage, glenoid bone, glenoid articular cartilage, biceps tendon, biceps anchor

CPT	
Code	Description
	complex, labrum, articular capsule, articular side of the rotator cuff, bursal side of the rotator cuff, subacromial bursa, foreign body[ies])
29824	Arthroscopy, shoulder, surgical; distal claviclectomy including distal articular surface (Mumford procedure)
29825	Arthroscopy, shoulder, surgical; with lysis and resection of adhesions, with or without manipulation
29828	Arthroscopy, shoulder, surgical; biceps tenodesis
+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)

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

BACKGROUND

Rotator Cuff Grades for Atrophy and Classification for Retears

Goutallier classification of fatty infiltration of rotator cuff musculature ⁽¹¹⁾

Grade 0 – Normal

Grade 1 – Mild - muscle contains some fatty streaks

Grade 2 – Moderate – more muscle than fat

Grade 3 – Severe – equal amounts of fat and muscle

Grade 4 – More fat than muscle

Warner classification of muscle atrophy of rotator cuff musculature ⁽¹⁸⁾

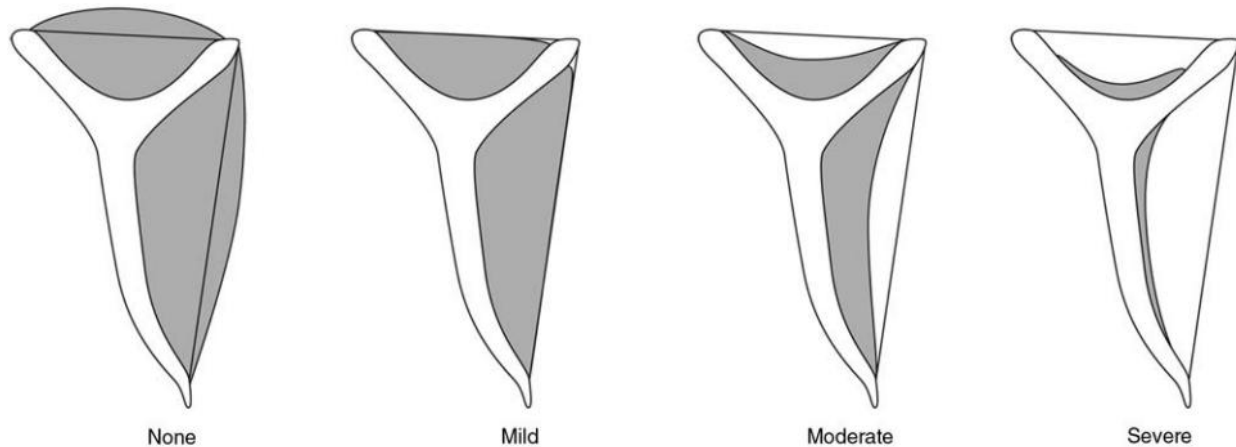


Illustration of the Warner method of evaluating rotator cuff atrophy based on T1-weighted sagittal oblique magnetic resonance images. The grade is determined by the amount of muscle above or below a line drawn from the edge of the coracoid to the tip of the scapular spine and a line from the superior aspect of the coracoid to the superior border of the scapular spine.

Hamada classification of rotator cuff arthropathy ⁽⁶²⁾

Acromiohumeral interval (AHI)

- Grade 1 – AHI over 6 mm
- Grade 2 – AHI < 5mm
- Grade 3 – Acetabulization
- Grade 4 – Acetabulization and narrowed GH joint
- Grade 5 - Acetabulization with humeral head collapse

Sugaya classification ⁽⁶³⁾

Revision rotator cuff repair

The Sugaya classification for evaluation in revision rotator cuff repair is as follows:

- Type I - Sufficient thickness, homogeneous tendon (low signal on T2 images)
- Type II - Sufficient thickness, partial high-intensity from within the tendon
- Type III - Insufficient thickness without discontinuity
- Type IV - Minor discontinuity on more than one slice, suggesting a small tear
- Type V - Major discontinuity suggesting a moderate or large tear

On-Track/Off-Track Instability of the Shoulder (36,37,64,65)

Latarjet or Remplissage procedures should be considered for anterior dislocations of the shoulder when there is evidence of an engaging 'off-track' Hill-Sachs lesion of the humerus, or if there is greater than 20% glenoid bone loss by X-ray, CT, or MRI.

The glenoid track, a zone of dynamic contact during arm elevation, is a unique biomechanical model that uses both glenoid and humeral head bone loss to predict subsequent risk of humeral head engagement and possible dislocation. An **engaging** Hill-Sachs bony defect, or 'off-track' lesion, is one in which the width of the bony defect is greater than the width of the glenoid track. Off-track engagement occurs when the medial margin of the Hill-Sachs defect engages the glenoid track. If there is bony loss of the glenoid as well, the glenoid track will proportionately be less, causing greater risk of engagement. A **nonengaging**, or 'on-track' Hill-Sachs lesion is one in which the width of the bony defect is less than the width of the glenoid track. Using preoperative CT or MR imaging, the glenoid track can identify individuals who are more likely to fail only a primary capsuloligamentous Bankart repair. Glenoid track evaluation shows that restoring the track (glenoid) to its normal width should be the first priority in restoring shoulder stability.

Subacromial Decompression (SAD)

There are 3 types of acromion anatomy according to Bigliani classification: type 1, flat (20%), type 2, curved (40%) and type 3, hooked, (40%). Acromioplasty involves removing bone from the undersurface of the acromion to change a type 3 (hooked) acromion to a type 1 (flat) acromion. Although debated for decades, current evidence concludes that there is no role for isolated acromioplasty (subacromial decompression), which prompted conversion of CPT code 29826 (acromioplasty, subacromial decompression) from an index, primary, "stand-alone" code to an "add-on" code only.

SUMMARY OF EVIDENCE

Management of Rotator Cuff Injuries ⁽⁷⁾:

- **Study Design:** This clinical practice guideline is based on a systematic review of current scientific and clinical research. The guideline contains 33 recommendations, including both diagnosis and treatment.
- **Target Population:** The guideline focuses on adults with rotator cuff injuries.
- **Key Factors:**
 - **Burden of Disease:** Chronic shoulder pain affects approximately 8% of American adults, with rotator cuff pathology being the leading cause of shoulder-related disability.
 - **Etiology:** Rotator cuff tears have two main causes: injury and degeneration.
 - **Incidence and Prevalence:** Approximately 4.5 million patient visits related to shoulder pain occur each year in the United States.
 - **Management of Small to Medium Tears:** Both physical therapy and surgical

management result in notable improvement in patient-reported outcomes for patients with symptomatic small to medium full-thickness rotator cuff tears.

- **Long-Term Nonsurgical Management:** Patient-reported outcomes improve with physical therapy in symptomatic patients with full-thickness rotator cuff tears, but tear size, muscle atrophy, and fatty infiltration may progress over 5 to 10 years.
- **Surgical Management:** Healed rotator cuff repairs show improved patient-reported and functional outcomes compared to physical therapy and unhealed repairs.
- **Acromioplasty and Rotator Cuff Repair:** Routine use of acromioplasty as a concomitant treatment is not supported compared to arthroscopic repair alone for patients with small to medium-sized full-thickness rotator cuff tears.
- **Diagnosis (Clinical Examination):** Clinical examination can be useful to diagnose or stratify patients with rotator cuff tears, but a combination of tests will increase diagnostic accuracy.
- **Diagnosis (Imaging):** MRI, MRA, and ultrasonography are useful adjuncts to a clinical examination for identifying rotator cuff tears.
- **Post-Op Mobilization Timing:** Similar postoperative clinical and patient-reported outcomes for small to medium-sized full-thickness rotator cuff tears between early and delayed mobilization.

Physical Examination Tests of the Shoulder ⁽⁹⁾:

- **Study Design:** This is a systematic review and meta-analysis of diagnostic test performance for physical examination tests (PETS) of the shoulder. The study adheres to the principles outlined in the Cochrane guidelines and the PRISMA statement.
- **Target Population:** The study includes data from 11 articles that met the inclusion criteria, focusing on patients with shoulder complaints.
- **Key Factors:**
 - **SLAP Lesions:** The Compression-Rotation test obtained the highest diagnostic odds ratio (DOR) among single PETS for SLAP lesions.
 - **Rotator Cuff Tears:** The Supraspinatus test obtained the highest DOR for diagnosing any full-thickness rotator cuff tear.
 - **Subacromial Impingement Syndrome:** The Hawkins test obtained the highest DOR for diagnosing subacromial impingement syndrome.
 - **Overall Validity:** The pooled DOR for PETS for SLAP lesions was 1.38, indicating statistical validity.
 - **Clinical Performance:** No single PETS showed superior clinical test performance, but a combination of tests may increase diagnostic accuracy.

Management of Rotator Cuff Injuries Evidence-Based Clinical Practice Guideline ⁽¹²⁾:

- **Study Design:** This clinical practice guideline (CPG) is based on a systematic review of published studies regarding the management of rotator cuff injuries. The review was conducted between October 2023 and June 2024, with the final search performed on June 7, 2024.

- **Target Population:** The guideline addresses the management of rotator cuff injuries in adults. It is not intended for pediatric patients.
- **Key Factors:**
 - **Management of Small to Medium Tears:** Both physical therapy and operative treatment result in significant improvement in patient-reported outcomes for patients with symptomatic small to medium full-thickness rotator cuff tears.
 - **Long-Term Non-Operative Management:** Patient-reported outcomes improve with physical therapy in symptomatic patients with full-thickness rotator cuff tears. However, the tear size, muscle atrophy, and fatty infiltration may progress over 5 to 10 years with non-operative management.
 - **Operative Management vs. Non-Operative Management:** Healed rotator cuff repairs show improved patient-reported and functional outcomes compared to physical therapy and unhealed repairs.
 - **Acromioplasty & Rotator Cuff Repair:** Routine use of acromioplasty as a concomitant treatment is not suggested for therapeutic benefit compared to arthroscopic repair alone for patients with small to medium-sized full-thickness rotator cuff tears.
 - **Diagnosis (Clinical Examination):** Clinical examination can be useful to diagnose or stratify patients with rotator cuff tears; however, a combination of tests will increase diagnostic accuracy.
 - **Diagnosis (Imaging):** MRI, MRA, CT, and ultrasound are useful adjuncts to a clinical exam and radiographs for identifying rotator cuff tears.
 - **Post-Op Mobilization Timing:** Postoperative clinical and patient-reported outcomes are similar for small to medium-sized full-thickness rotator cuff tears managed with early or delayed mobilization.

ANALYSIS OF EVIDENCE

Shared Findings:

- **Effectiveness of Physical Therapy and Surgical Management:**
 - All three documents agree that both physical therapy and surgical management result in significant improvements in patient-reported outcomes (PROs) for patients with symptomatic small to medium full-thickness rotator cuff tears. ^(7,9,12)
 - Long-term non-operative management with physical therapy improves PROs, but the tear size, muscle atrophy, and fatty infiltration may progress over 5 to 10 years. ^(7,12)
- **Diagnosis and Imaging:**
 - Clinical examination and imaging techniques such as MRI, MRA, CT, and ultrasound are useful adjuncts for diagnosing rotator cuff tears. ^(7,12)
 - A combination of physical examination tests (PETS) increases diagnostic accuracy compared to any single test. ^(7,9)

- **Post-Operative Management:**

- Post-operative clinical and patient-reported outcomes are similar for small to medium-sized full-thickness rotator cuff tears managed with early or delayed mobilization. ^(7,12)
- Routine use of acromioplasty as a concomitant treatment is not suggested for therapeutic benefit compared to arthroscopic repair alone. ^(7,12)

Differing Findings:

- **Specific Physical Examination Tests:**

- The Gismervik et al. (2017) study provides a detailed analysis of various PETS, highlighting the diagnostic odds ratio (DOR) for different tests. For example, the Supraspinatus test obtained the highest DOR for diagnosing any full-thickness rotator cuff tear. ⁽⁹⁾ This level of detail is not present in the other two documents.

- **Biological Augmentation and Other Treatments:**

- The Weber et al. (2020) document discusses the use of biological augmentation with platelet-derived products, noting that while it does not improve PROs, limited evidence supports its use in decreasing retear rates. ⁽⁷⁾ This topic is not covered in the other two documents.

- **Specific Recommendations and Strength of Evidence:**

- The Weber et al. (2020) document provides a detailed breakdown of recommendations with varying strengths of evidence, including strong, moderate, limited, and consensus recommendations. ⁽⁷⁾ This structured approach to recommendations is more comprehensive compared to the other two documents.

In summary, the evidence suggests that shoulder arthroscopy, combined with appropriate diagnostic and post-operative management strategies, is a valuable approach for treating rotator cuff injuries. The detailed analysis of PETS in the Gismervik et al. (2017) study and the comprehensive recommendations in the Weber et al. (2020) document provide additional insights that can guide clinical decision-making.

POLICY HISTORY

Date	Summary
July 2026	● Labral Repairs Contraindications section updated to clarify language ● Added in Anterior-Inferior Labral Tear (Bankart Lesion) – Relative Contraindications section and updated the clinical content ● Updated references
December 2025	● Updated references

Date	Summary
	• Updated the General Information and Disclaimer sections • Updated definition of massive tear to > 5 cm and/or ≥2 tendons in Rotator Cuff Repair section • Updated the Hamada grade to ≤2 and the Goutallier grade to ≥ 3 in the RCR Isolated Superior Capsular Reconstruction • Smoking cessation contraindication added to RCR Contraindications section • Updated the Anterior-Inferior Labral Tears Contraindications section to include seizure disorders, collagen disorders, neurologic injuries, and atraumatic instability • MRI with arthrogram added to Multidirectional Instability of the Shoulder section • Warner classification of muscle atrophy and image added to Background section. • Background section updated. • Added CPT codes table to match new formatting. • Added Summary of Evidence and Analysis of Evidence.
November 2024	• This guideline replaces Evolent Clinical Guideline 318 for Shoulder Arthroscopy • Added indications for biceps tenodesis for long head of the biceps ruptures • Removed background sections for: labral repairs, adhesive capsulitis, DCE, LHB, Loose body removal, synovectomy and added on-track/off-track instability to background section

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

Disclaimer

Evolent Clinical Guidelines do not constitute medical advice. Treating health care professionals are solely responsible for diagnosis, treatment, and medical advice. Evolent uses Clinical Guidelines in accordance with its contractual obligations to provide utilization management.



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Evolent Clinical Guidelines are comprehensive and inclusive of various procedural applications for each service type. Our guidelines may be used to supplement Medicare criteria when such criteria is not fully established. When Medicare criteria is determined to not be fully established, we only reference the relevant portion of the corresponding Evolent Clinical Guideline that is applicable to the specific service or item requested in order to determine medical necessity.

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