

Brief Summary



GUIDELINE TITLE

Shoulder (acute & chronic).

BIBLIOGRAPHIC SOURCE(S)

Work Loss Data Institute. **Shoulder** (acute & chronic). Corpus Christi (TX): Work Loss Data Institute; 2008. 217 p. [226 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Work Loss Data Institute. **Shoulder** (acute & chronic). Corpus Christi (TX): Work Loss Data Institute; 2007 Jul 5. 191 p.

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RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Initial Diagnosis

- First visit: with Primary Care Physician MD/DO (100%)
- Initial evaluation should include:
 - Determine the type of trauma (e.g., direct trauma, fall, repetitive motion, twisting incident, etc.)
 - Test the range-of-motion of the joint (normal, mild restriction, severe restriction, or complete restriction)
 - An initial evaluation of the **shoulder** requires accurate diagnosis of **shoulder** injuries by careful inspection and palpation of the **shoulder** area. Although the **shoulder** is generally swollen, the injury is usually defined by direct tenderness over the injured area.
- **Determine "degenerative changes" versus "acute trauma":**
 - **Degenerative changes** (Go to *Initial Conservative Treatment*) Lesions of the rotator cuff are a continuum, from mild inflammation and degeneration to full avulsions. Studies of normal subjects document the universal presence of degenerative changes and conditions, including full avulsions without symptoms. Conservative treatment has results similar to surgical treatment but without surgical risks. Surgical outcomes are much better in younger patients with a rotator cuff tear, than in older patients, who may be suffering from degenerative changes in the rotator cuff. Impingement syndrome, **shoulder** tendonitis, **shoulder** sprain, and subacromial bursitis are all closely related entities with the same etiology. They involve friction, abrasion, and inflammation of the rotator cuff and the long head of the biceps tendon with the subacromial arch (anterior lip of the acromion, coracoacromial ligament, and acromioclavicular joint). These conditions involve consequences of aging or repetitive use, or a combination thereof, such as:
 - Impingement syndrome (age >40 years, weakness, cuff tenderness, **pain**ful range of motion [ROM], impingement sign, radiographic findings, night **pain**, history of catching, or **pain** with **shoulder** motion)
 - Rotator cuff tendonitis (similar)
 - Rotator cuff tear (only Types I and II, partial tear, age >40 yrs)
 - Adhesive capsulitis, frozen **shoulder** (progressive **pain** and stiffness, diabetes or trauma, decreased passive ROM, normal x-rays, night **pain**)
 - Tendinopathy
 - Bicipital tendon disorders
 - Bursitis
 - **Acute trauma** (Go directly to *Aggressive Treatment*)

- Acute rotator cuff tear (type III, age <40 yrs)
- Acromioclavicular (AC) joint strain or separation
 - Types I-III versus Types IV-VI (rare, surgery may be indicated)
- Rule out diagnoses (See other treatment parameters for each of these):
 - Referred neck **pain** (see the original guideline document for International Classification of Diseases, Ninth Revision [ICD-9] codes for this and other diagnoses)
 - Thoracic outlet syndrome, brachial plexus disorders
 - Fractures (treat clavicular fractures mostly nonoperatively)
 - Laceration
 - Glenohumeral **shoulder** joint dislocation
 - Arthritis

Mild/Moderate -- Initial Conservative Treatment (90% of cases)

- Also first visit (day 1):
 - Prescribe alteration of activity (home and work), no overhead work, stretching (gentle range-of-motion exercises), appropriate analgesia (i.e., acetaminophen) and/or anti-inflammatory (i.e., ibuprofen) [*Benchmark cost: \$14*], back to work--modified duty: if condition caused by job, possible ergonomic evaluation of job

Official Disability **Guidelines** (ODG) Return-To-Work Pathways

Medical treatment (Grade I or II¹, impingement, no tear), modified work: 0 days

Medical treatment (impingement, no tear), manual work: 7 days

(See *ODG Capabilities & Activity Modifications for Restricted Work* under "Work" in the Procedure Summary of the original guideline document)

- Second visit (day 8 to 20 – about 2 weeks after first visit or sooner because delayed treatment is not recommended)
 - Document progress
 - If not significantly improved, then prescribe physical therapy (gentle range-of-motion exercises plus exercises that strengthen the rotators and stabilize the scapula); should be started for home exercise training [*Benchmark cost: \$250*]: Refer to Physical Therapist (50%) or Occupational Therapist (50%) for 3 visits per week for 2 weeks.
- Third visit (day 21 to 35 - about 1 month after first visit)
 - Document progress
 - Further relaxation and **pain** control can be achieved by injecting an anesthetic under the acromion (laterally or anteriorly) into the **shoulder** joint.
 - Corticosteroid injection trial [*Benchmark cost: \$276*]. Should be performed by musculoskeletal-trained physician. Sprains of the rotator cuff cause swelling within a closed space and add an element of chronic impingement which may be slow to resolve. By decreasing swelling, local infiltration of the rotator cuff with corticosteroids may quicken the resolution of this problem. Repeat corticosteroid injection may be necessary, but should not be done any sooner than every two weeks, up to a maximum of three injections. Injection should be avoided in patients under 30 years of age.
 - If prescribe therapy, then continue therapist, change from passive to active modality, up to 2 visits per week, teach home exercises.

ODG Return-To-Work Pathways

Medical treatment (impingement, no tear), manual overhead work: 28 days

Medical treatment, regular work if cause of disability: 42 days

Medical treatment, heavy manual work: 42 days

- Fourth visit (day 42 - about 6 weeks after first visit)
 - Refer for imaging

Imaging (30% of cases)

[*Benchmark cost: \$370-\$1,200*]

- Magnetic resonance images (MRIs) are quite accurate in differentiating chronic impingement from tears of the rotator cuff and should be employed when:
 - A surgical approach is being considered
 - The diagnosis is unclear
 - The clinical examination is limited

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- MR arthrograms are accurate in diagnosing labral tears.
- X-rays: special views of AC joint, with weights in hand for AC separation
- Diagnostic ultrasound is an option.
- If indicated by imaging, and no improvement from initial conservative therapy, refer for aggressive treatment at three months.

Aggressive Treatment (10% of cases)

[Benchmark cost: \$2,621]

- Include imaging as above
- Dislocation: After reduction, the first and second dislocations of the **shoulder** are treated nonsurgically except in unusual circumstances. An initial dislocation should generally be treated with three or more weeks of immobilization in a sling and swathe. This is followed by a progressive exercise program to strengthen the muscles of the **shoulder** girdle and, thus, reduce the probability of recurrent dislocations. A second dislocation may be treated in a sling until asymptomatic. After a third dislocation, further dislocations may be presumed to be imminent, and orthopedic referral for consideration of a surgical repair is appropriate.
- Arthroscopy, **Shoulder**, Surgical: Rotator cuff repair, with decompression of subacromial space with partial acromioplasty, with or without coracoacromial release. Performed by Orthopedic Surgeon (90%) or General Surgeon (10%) on an outpatient or 23-hour basis. May be endoscopic. Decompression/acromioplasty alone should be performed after at least six weeks of conservative treatment.
- Labral tears: When the glenoid labrum becomes injured or torn, it is described as a labral tear. These tears may be classified by the position of the tear in relation to the glenoid (which is often called the "**shoulder** socket"). A Bankart tear is a tear in the labrum located in the front, lower (anterior, inferior) part of the **shoulder** socket. This type of tear occurs most commonly during a **shoulder** dislocation. A Bankart tear makes the **shoulder** more prone to recurrent dislocations. A SLAP tear (Superior Labral tear from Anterior to Posterior) is a tear in the labrum that covers the top part of the **shoulder** socket from front to back. A SLAP tear occurs at the point where the long head of biceps tendon attaches. This type of tear occurs most commonly during falls on an outstretched arm. Most superior labral tears can be treated with anti-inflammatory medications, activity modification and physical therapy, but if nonoperative treatment fails, surgery may be indicated.
- Clavicle (collarbone) fractures are common injuries, and they can occur different ways. Some patients fall on an outstretched hand, others fall and hit the outside of their **shoulder**. Treatment of clavicle fractures most commonly involves resting the affected extremity in a sling. It is unusual for a clavicle fracture to require surgery, but surgery is required in some situations when either the skin is broken or the fracture is severely displaced or shortened.
- Post-surgical treatment
 - Physical/Occupational Therapy: A short course *may* be needed; if so then post-surgical treatment (endoscopic): 14 visits over 8 weeks; post-surgical treatment (open): 20 visits over 10 weeks

ODG Return-To-Work PathwaysArthroscopic surgical repair/acromioplasty (Grade III¹), clerical/modified work: 28 to 56 days

Arthroscopic surgical repair/acromioplasty, manual work, non-dominant arm: 56 to 90 days

Arthroscopic surgical repair/acromioplasty, manual work, dominant arm: 70 to 90 days

Open surgery (Grade III¹), clerical/modified work: 42 to 56 days

Open surgery, manual work, non-dominant arm: 70 to 90 days

Open surgery, manual work, dominant arm: 90 to 106 days

Open surgery, heavy manual work if cause of disability: indefinite

¹**Definition of Sprain/Strain Severity Grade:** In general, a Grade I or mild sprain/strain is caused by overstretching or slight tearing of the ligament/muscle/tendon with no instability, and a person with a mild sprain usually experiences minimal **pain**, swelling, and little or no loss of functional ability. Although the injured muscle is tender and **painful**, it has normal strength. A Grade II sprain/strain is caused by incomplete tearing of the ligament/muscle/tendon and is characterized by bruising, moderate **pain**, and swelling, and a Grade III sprain/strain means complete tear or rupture of a ligament/muscle/tendon. A sprain is a stretch and/or tear of a ligament (a band of fibrous tissue that connects two or more bones at a joint). A strain is an injury to either a muscle or a tendon (fibrous cords of tissue that connect muscle to bone).

CLINICAL ALGORITHM(S)

None provided

[Top^](#)**EVIDENCE SUPPORTING THE RECOMMENDATIONS****TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS**

During the comprehensive medical literature review, preference was given to high quality systematic reviews, meta-analyses, and clinical trials over the past ten years, plus existing nationally recognized treatment **guidelines** from the leading specialty societies.

The heart of each Work Loss Data Institute guideline is the Procedure Summary (see the original guideline document), which provides a concise synopsis of effectiveness, if any, of each treatment method based on existing medical evidence. Each summary and subsequent recommendation is hyper-linked into the studies on which they are based, in abstract form, which have been ranked, highlighted and indexed.

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IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

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2003 (revised 2008 May 28)

GUIDELINE DEVELOPER(S)

Work Loss Data Institute - Public For Profit Organization

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Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Editor-in-Chief, Philip L. Denniston, Jr. and Senior Medical Editor, Charles W. Kennedy, Jr., MD, together pilot the group of approximately 80 members. See the ODG *Treatment in Workers Comp* [Editorial Advisory Board](#).

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

There are no conflicts of interest among the guideline development members.

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GUIDELINE AVAILABILITY

Electronic copies: Available to subscribers from the [Work Loss Data Institute Web site](#).

Print copies: Available from the Work Loss Data Institute, 169 Saxony Road, Suite 210, Encinitas, CA 92024; Phone: 800-488-5548, 760-753-9992, Fax: 760-753-9995; www.worklossdata.com.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Background information on the development of the Official Disability **Guidelines** of the Work Loss Data Institute is available from the [Work Loss Data Institute Web site](#).
- Appendix A. ODG Treatment in Workers' Comp. Methodology description using the AGREE instrument. Available to subscribers from the [Work Loss Data Institute Web site](#).

PATIENT RESOURCES

The following is available:

- Appendix C. ODG Treatment in Workers' Comp. Patient information resources. 2008.

Electronic copies: Available to subscribers from the [Work Loss Data Institute Web site](#).

Print copies: Available from the Work Loss Data Institute, 169 Saxony Road, Suite 210, Encinitas, CA 92024; Phone: 800-488-5548, 760-753-9992, Fax: 760-753-9995; www.worklossdata.com.

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NGC STATUS

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