

Shoulder instability is a soft tissue or bony insult of the shoulder that causes the humeral head to sublunate or dislocate from the glenoid fossa (Varacallo M et al, 2022). Over 95% of shoulder instability events occur in the anterior direction. (Walton J. et al, 2002)

History	
Shoulder Pain	Classifications
<p>A comprehensive history, exam, diagnostic imaging studies, and accurate characterization of each patient's instability pattern will help clinicians properly manage each patient appropriately. (Varacallo M, et al. 2022)</p>	<p>First Time Dislocations:</p> <ul style="list-style-type: none"> • Patients usually present after a single acute higher energy traumatic event. <p>S/S may include:</p> <ul style="list-style-type: none"> • Intense shoulder pain, • Deformity • Inability to move the shoulder or shoulder weakness • Numbness and tingling <p>Chronic Instability:</p> <ul style="list-style-type: none"> • Patients usually present once the range of motion limitations begin to impact daily activities. • Heightened clinical suspicion is warranted with an associated hx of seizures or electrical shock. • Polytrauma, where the initial injury may be overlooked.

Physical Examination Findings	
<p>Observation/Posture</p> <ul style="list-style-type: none"> • Examiners should observe and compare bilateral shoulder girdles for any notable asymmetry (Sulcus sign), scapular posturing, muscle comparison, or atrophic changes. • The skin should be observed for the presence of any previous surgical incisions, lacerations, or scars. <p>AROM</p> <ul style="list-style-type: none"> • Glenohumeral AROM, Scapulocostal motion, and scapular winging should also be evaluated. • ROM may be limited initially after an acute event. • In shoulder instability cases, assessment of the axillary nerve along with evidence of significant muscular weakness may hint at an underlying associated neurologic deficit (Tzannes, 2002). <p>Palpation</p> <ul style="list-style-type: none"> • Shoulder tenderness and fullness is usually present along the deltoid. • Painful joint play may be noted with anterior and inferior glide. • Distal pulses should be assessed at the wrist as well. 	<p>Orthopedic/Neurological Exam</p> <ul style="list-style-type: none"> • A sensory examination should be performed in all acute and chronic instability patients. In addition to axillary nerve function, motor function of the elbow, wrist, and hand should undergo an evaluation to rule out the possibility of a brachial plexus injury associated with the dislocation. • For older patients and in the setting of suspected concomitant shoulder pathologies (rotator cuff injuries or biceps tendon pathology), specialized testing for these pathologies should also be considered (Tzannes et. al. 2002). <p>Instability Orthopedics:</p> <ul style="list-style-type: none"> • Sulcus Sign (Observation) (Inferior Instability) • Sulcus Test (Inferior Instability) • Feagin's Test (Inferior Instability) • Anterior apprehension (Anterior Instability) • Relocation (Anterior Instability) • Release (Anterior Instability) • Anterior Load & Shift (Anterior Instability) • Dugas (Anterior Instability) • Posterior apprehension (Posterior Instability) • Posterior Load & Shift (Posterior Instability) • Norwood's Stress Test (Posterior Instability)

Ancillary Tests	
<ul style="list-style-type: none"> • Laboratory studies are not useful. • The role of imaging is to r/o concomitant fx and provide structural information. X-Rays are the first imaging approach, including true A-P (Grashey view), axillary and "Y" views. If significant fracture is present consultation with an orthopedist is indicated. 	<ul style="list-style-type: none"> • MRI is preferred to visualize labral injuries. Intra-articular contrast (MR arthrography enhances the study). MRI also provides for assessment of osseous glenohumeral defects or glenohumeral avulsions (Barchilon et. al. 2008) • CT imaging is the preferred imaging modality for bony injury (Tennent et. al. 2017)

Treatment Options
<p>In the acute (still dislocated) setting immediate reduction and immobilization are the initial first steps. Reductions should be carefully done by a skilled practitioner to avoid additional injury.</p> <p>Surgical Intervention</p> <ul style="list-style-type: none"> • Surgical intervention should be considered in the following presentations: young patients (esp.< 20yo), w/ recurrent dislocation, active overhead lifestyles, w/ fracture, w/ concomitant rotator cuff injury and w/ irreducible dislocations. • Also consider surgical referral w/ intolerance to shoulder bracing, the inability to return to function following conservative care or when a patient requests referral. (Dickens et al. 2014).



Treatment Options

Non-Surgical Intervention

- The duration of initial immobilization for first-time traumatic anterior shoulder dislocation is controversial. Sling immobilization is typically used for 1 to 3 weeks for capsular healing, followed by months of rehabilitation, including ROM and strengthening exercises. (Wang SI, 2018)
- In young patients, recurrence is significantly more common than patients over 40. (Olds M et al. 2015)
- Goals of conservative care emphasis on pain control, increased shoulder stability, increased pain free AROM, improved shoulder segmental motion, increased muscular stability, and improved mechanical faults.

Exercise

- Shoulder isometrics (flexion, extension, internal rotation, external rotation, adduction, and abduction) can then be added followed by a scapular stability program for overall shoulder strength.
- As range of motion increases and pain decreases, incorporating work/sport specific exercises can be added.

Manual therapy

- Soft tissue techniques can be incorporated if myofascial pain is present (PIR, Pin and Stretch, Ischemic Compression) as tolerated by patient.

Activity modification

- Avoid painful motions, abduction and ER which may exacerbate the symptoms.
- Focus on staying within a pain free zone.

Common treatment duration:

- 4-12 weeks

Other options

- Pharmaceuticals
- Acupuncture/dry needling

Potential ICD 10 Codes

- **M25.319** = Instability of Unspecific Shoulder
- **S43.0** = Subluxation and Dislocation of Shoulder Joint

DDX List for this Condition

- Multi-Directional Instability (MDI)
- Glenohumeral Subluxation
- Rotator Cuff Tear
- Labral Tear

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References

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