

Frozen Shoulder



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Frozen shoulder (FS): A painful and disabling disorder in which the capsule of the glenohumeral joint becomes inflamed and stiff, greatly restricting movement and causing chronic pain. FS can be divided into three phases:

1. **Freezing** - insidious onset of shoulder pain with progressive loss of motion (lasts for 2-9 months)
2. **Frozen** - gradual subsidence of pain, plateauing of stiffness with equal active and passive ROM (lasts for 4-12 months)
3. **Thawing** - gradual improvement of motion and resolution of symptoms (lasts for 12-42 months)

Risk factors:

- Hyper- or hypothyroidism
- Long periods of inactivity (from injury, stroke or illness)
- Female gender
- Diabetes mellitus

Pathophysiology:

- Contracture of the glenohumeral capsule
- Presence of inflammatory cytokines in synovial fluid which mediates nociception during the freezing stage
- Atrophy of the synovial layer of the capsule
- Presence of dense collagenous tissue in the joint capsule during the frozen stage

Presentation

- Sudden onset of unilateral anterior shoulder pain
- Shoulder passive and active range of motion restriction
- **Capsular pattern of limitation** - reduced ROM in lateral shoulder rotation > abduction > medial rotation
- Occasionally numbness or paresthesia distally in fingers
- Difficulty with clothing or overhead movements
- Occasionally neck pain due to overuse of cervical musculature to compensate for loss of shoulder motion

Management

- **Shared decision-making** on accessing available interventions based on level of symptoms and functional restriction
- **Self-management** - FS is self-limiting and patient may benefit from exercise within pain-free ROM and FS education
- **Home exercise programme** immediately after **corticosteroid injection**
- Manipulation under anaesthesia - controlled rupture of the contracted shoulder capsule to restore lateral rotation
- Arthroscopic capsular release - surgical release of anterior capsule improves lateral rotation
- Hydrodilatation
- **NSAIDs** for pain control - short-term pain relief during the early freezing stage

Diagnosis

- Diagnosis of exclusion - rule out other causes first
- Similar shoulder passive and active range of motion
- Greatest limitation in ROM seen in shoulder lateral rotation
- Pain upon palpation of coracoid process
- Generally no shoulder imaging required - USS and MRI may show sclerosis of coracohumeral ligament



Want to learn more?

With AcePhysio the learning journey doesn't stop here! Take a look at our further reading recommendations below to become an expert in frozen shoulder:

1. BESS/BOA Patient Care Pathways Frozen Shoulder' Shoulder&Elbow 2015; 7: 299-307.
2. Le, Hai V et al. "Adhesive capsulitis of the shoulder: review of pathophysiology and current clinical treatments." Shoulder & elbow vol. 9,2 (2017): 75-84.
3. Mezian K, Coffey R, Chang KV. Frozen Shoulder. [Updated 2020 Sep 3]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK482162/>