

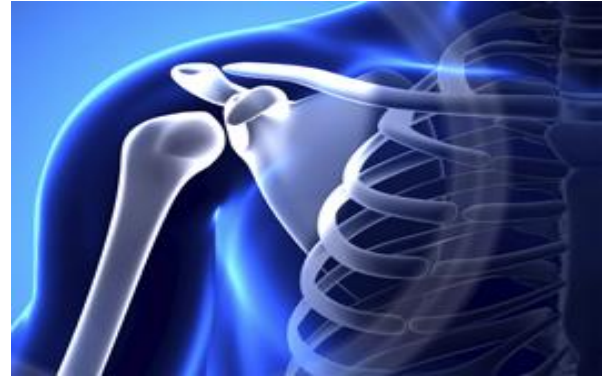
MUSCULOSKELETAL

SHOULDER DISLOCATION

Due to the evolutionary trade off of mobility vs stability, the shoulder is the **most frequently dislocated joint of the body**.

Dislocation is **usually a result of extreme abduction or external rotation** of the humerus on the glenoid e.g. a fall backwards onto an outstretched arm.

The mechanism either **overcomes the rotator cuff muscles' ability to maintain stability** or the patient's muscles did not have time to brace themselves.



The diagnosis may be suspected based on history and clinical examination, and confirmed by x-ray.

Symptoms & signs may include:

- Pain
- Immobility of the joint
- Paraesthesia in the distal limb
- Numbness over the 'regimental badge' area
- Visible deformity e.g. 'squaring' of the shoulder
- Inability to palpate the humeral head
- **95% of shoulder dislocations are anterior**, with the humeral head rest under the coracoid process.
- However, the humerus **may also dislocate inferiorly or posteriorly**.
- Posterior dislocations in particular can be difficult to detect on plain films



X-rays showing dislocation sites:

Anterior dislocation

Usually result from a **FOOSH**
Arm is usually held externally rotated

Axillary nerve may be damaged (test regimental badge sensation)
May also damage suprascapular or radial nerves



Posterior dislocation

Often due to imbalanced muscle contraction during **seizures**
The coracoid process may be particularly prominent
Arm often held internally rotated & adducted
'Lightbulb sign' on x-ray:



Inferior dislocation

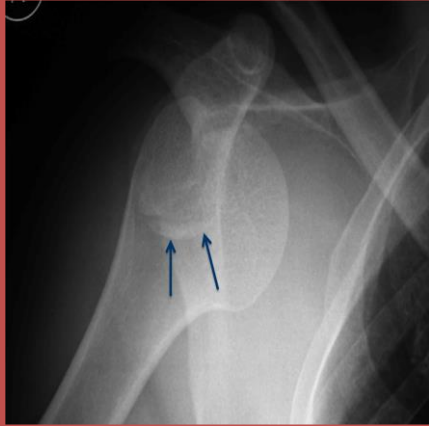
Least common of all shoulder dislocations (**approx. 0.5%**)
Also known as luxation erecta
Arm appears permanently upwards or behind the head
Caused by **hyper abduction** of the arm with the **acromion acting as a lever to pivot** the humeral head away from the glenoid e.g. a fall in a diving position
High risk of neurovascular injury



An **x-ray of the shoulder is important prior to reduction** to confirm dislocation and also **to rule out coexisting fracture** e.g. a Bankhart lesion of the inferior glenoid, Hill Sachs deformity of the posterolateral head of humerus or fracture of the proximal humerus (especially in the elderly)

(Bony) Bankhart Lesion

A Bankhart lesion is a tear of the anterior glenoid labrum. Force of dislocation can cause a **fracture of the inferior aspect of the glenoid cavity**. **Either a soft tissue or bony Bankhart lesion is an indication for surgery**



Hill Sachs Lesion

Often accompanies a Bankhart lesion

Caused by either anterior or posterior dislocation with impaction of posterolateral humeral head against the glenoid. Leads to divot in posterolateral



Proximal Humerus Fracture

Most often in elderly or osteoporotic patients. Needs surgical reduction. Patient should be well analgised and put in a polysling for comfort. **May have associated neurovascular injury**



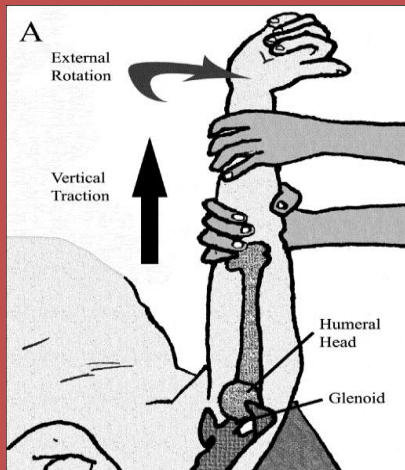
Reduction

For a simple reduction the patient should receive adequate analgesia and be moved to resus. Reduction may be achieved using Entonox but often will require conscious sedation.

There are a variety of methods of reduction, the choice of which to use is often operator dependent based on their own experience. Often reduction is achieved via a mixture of techniques.

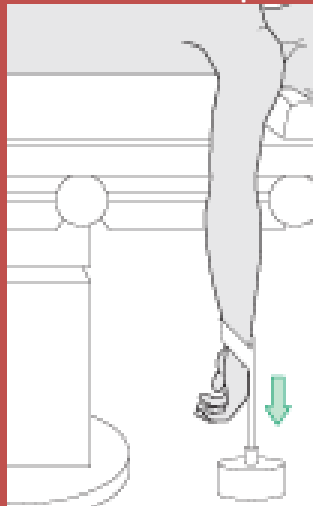
Spaso technique

Upward traction with external rotation. Pressure can be applied to the humeral head to assist reduction



Stimson technique

A weight is suspended from the wrist to overcome muscle spasm



Hippocratic technique

This should be a last resort, it is quite brutal to the patient... and aesthetically

