

# Standard Operating Procedure

## Anterior Shoulder Reduction - Stimson (Hanging Arm) Technique

### 1. Purpose

Provide a safe, reproducible method for reducing anterior shoulder dislocations using gravity assistance while minimising patient discomfort and the need for procedural sedation.

### 2. Scope

- Adult patients (>16 yr) with isolated anterior shoulder dislocation presenting to the Emergency Department.
- Excludes complex fracture-dislocations and polytrauma.

### 3. Indications

- Confirmed anterior shoulder dislocation on X-ray.
- Patient can lie prone for  $\geq 30$  minutes, is independently mobile and medically fit.
- Useful whilst awaiting procedural sedation or as a first-line technique.

### 4. Contraindications

- Associated fractures that would otherwise preclude closed reduction e.g. surgical neck of humerus; glenoid rim.
- Dislocations >7 days old.
- Polytrauma
- Clinical intoxication or inability to cooperate.
- Pregnancy (prone position discomfort/ aortacaval compression)
- Frailty
- Severe cardiopulmonary disease.
- Any other comorbidities that would make prone positioning challenging or unsafe.

### 5. Location & Safety

- Perform in Pod A or B (RIE ED) or equivalent cubicle with immediate staff visibility.
- In terms of observations, if IV opioid used then patients require pulse oximetry at minimum to ensure monitoring of oxygen saturations and heart rate.
- Provide lone patients with a remote call bell for the unaffected hand.

## 6. Equipment Checklist

Item	Check
Bed with height adjustment	
Pillow for head support	
Wrist hook strap (stored in Anaesthetic Room cupboard)	
Kettlebells: 2kg; 4kg; 6kg; 8kg (stored in Anaesthetic Room cupboard)	
Stockinette & Soft Band (labeled as 7.5 cm ortho padding in Plaster Trolley)	
Analgesia: - IV access + Fentanyl (25-50 mcg IV) or Morphine (2.5-5mg IV) OR - Consider administering Oramorph 5-10mg if identified early (e.g. at triage while awaiting a cubicle or equipment), bearing in mind that it takes 1-2 hrs to reach peak effect	
Post-reduction sling	
Optional - Entonox (50% nitrous oxide; 50% oxygen)	

## 8. Procedure

### 8.1 Preparation & Consent

1. Review pre-reduction X-ray, confirm dislocation and exclude fracture.
2. Explain procedure, anticipated duration (up to 25 minutes) and success rate (~80%).
3. Obtain verbal or written consent.
4. Offer and administer opioid analgesia (unless contraindication) +/- Entonox

### 8.2 Positioning:

- The patient should lie **prone** on the bed with their head resting on a pillow. The bedside should be up, and the injured arm should be hanging over the side (see Figure 1).
- Avoid any metal protrusions from the trolley edge. The patient may need to move down the bed slightly to do so (see Figure 2).
- Ensure the bed height allows the arm to hang freely with no obstruction.
- Ask the patient to turn their head away from the injured side.
- Secure a wrist hook strap on the patient's forearm (the hook should sit in the palm of the patient's hand).



Figure 1: Correct positioning



Figure 2: Avoid metal protrusions from the trolley edge such as the one shown here (red circle).

### 8.3 Reduction

<u>Time</u>	<u>Action</u>
0 min	Attach 2-4kg kettlebell- choose lighter weight for low muscle tone, heavier for muscular build. Ensure free hanging
10 min	Re-assess: if no reduction, increase weight to 6-8kg. Encourage deep breathing/relaxation.
20 min	If still unreduced, proceed to *Additional manoeuvres*
25 min	Stop current attempt and consider formal procedural sedation or Orthopaedic referral.

Most patients describe a sudden ‘clunk’ or pain relief on reduction. Visually confirm restored contour.

### 8.4 Additional Manoeuvres

1. Gentle external rotation of forearm by assistant while weight hangs
2. **Scapular manipulation technique:**

Use the fingers of one hand to stabilise the superior aspect (base) of the scapula whilst using both your thumbs to gently and gradually apply a medial and dorsal force to the inferior tip of the scapula. Attempt to slightly displace the tip dorsally while pushing it towards the spine. Additional gently external rotation of the humerus provided by an assistant (with the weights still attached) may increase the efficacy of this technique. Reduction usually occurs within a few minutes and may be subtle.

Guide video can be found here:

<https://www.msdmanuals.com/professional/multimedia/video/how-to-reduce-anterior-shoulder-dislocations-scapular-manipulation>



Figure 3: QR code for scapular manipulation video

Failing the above, consider formal procedural sedation or Orthopaedic referral.

### 8.5 Post-reduction Care

- Remove weight and support arm across chest.
- Neurovascular check: axillary nerve (regimental-badge sensation); radial pulse; cap refill; finger/wrist extension; document findings.
- Confirm reduction on X-ray.
- Apply sling.
- Provide discharge advice and arrange orthopaedic follow-up (TTC).

### 9. Warnings & Common Pitfalls

- Do not exceed 25 minutes total traction to avoid neurovascular injury.
- Ensure secure positioning to prevent patient falls.
- Inadequate analgesia or muscle relaxation markedly reduces success.
- Not documenting pre and post reduction neurovascular status.
- Allowing metal trolley edges to impinge on arm, causing pressure injury.

### References

- (1) MSD Manuals (2023) *How to Reduce Anterior Shoulder Dislocations Using the Stimson Technique*. Available at: [https://www.msdmanuals.com/professional/injuries-poisoning/how-to-reduce-dislocations-and-subluxations/how-to-reduce-anterior-shoulder-dislocations-using-the-stimson-technique#Equipment\\_v45398862](https://www.msdmanuals.com/professional/injuries-poisoning/how-to-reduce-dislocations-and-subluxations/how-to-reduce-anterior-shoulder-dislocations-using-the-stimson-technique#Equipment_v45398862) (Accessed: 26 May 2025).
- (2) MSD Manuals (2023) *How to Reduce Anterior Shoulder Dislocations Using Scapular Manipulation*. Available at: <https://www.msdmanuals.com/professional/injuries-poisoning/how-to-reduce-dislocations-and-subluxations/how-to-reduce-anterior-shoulder-dislocations-using-scapular-manipulation> (Accessed: 26 May 2025).
- (3) NHS Forth Valley guide

