

## Shoulder Dislocation

Shoulder Dislocations  
 Extent: 45-60 minutes  
 Instructor: one  
 Students: 2-4  
 Equipment: skeleton shoulder model or anatomical diagrams

### Activity Outline:

General Goal: This station has two main goals. First is to drill students in the procedure for reducing a shoulder dislocation. Second is to discuss in some detail the theory and pathophysiology of anterior shoulder dislocations.

- Students and instructor will discuss, and during subsequent simulated reduction will verbalize, criteria for diagnosing anterior shoulder dislocation:
  - proper mechanism of injury (indirect injury);
  - patient can't bring arm across chest to touch opposite shoulder (instructor will note that this applies only to anterior dislocations but this accounts for the vast majority of shoulder dislocations); and
  - student can see and feel a "notch and hole" on exam of the shoulder.
- Students and instructor will discuss, and during subsequent simulated reduction will verbalize, criteria for attempting shoulder reduction in the field, and the reasons for them:
  - must be long transport time, and must have on-line command or standing orders (discuss the sequelae of leaving shoulder out, including damage to bones, blood vessels, nerves; and role of reduction for pain control); **or**,
  - if can't evacuate patient unreduced (e.g., small passage); **or**
  - if absent neuro or vascular status (note that this is a criterion for reduction on the street, too); **or**
  - so patient can self-rescue, if required for safety.
- Students will discuss advantages and disadvantages of hanging traction vs. direct reduction.
  - Passive nature of hanging traction -- less likely to cause harm
  - Need for adequate location for hanging traction
  - Need to use carefully-padded sling for hanging weight to avoid neurovascular compromise from the sling
  - Various techniques for direct reduction:
    - Some of which may cause danger of humerus fracture especially in older patients (e.g., Hippocratic "dirty sock method" with foot in axilla).
    - Also some other manipulation techniques including scapular manipulation and simply bringing into the extended and externally-rotated position.
    - Some interesting variations such as "Eskimo technique" (traction upwards on patient lying on uninjured side) that can be accomplished by one person on the Greenland ice floes.
    - WEMSI has chosen "Milch technique" which is traction slightly upward with shoulder extended and externally rotated ("throwing a baseball" overhand) as being easy and having high rate of success.
- Students will discuss and practice an appropriate detailed neurovascular check for a suspected shoulder dislocation:
  - neurovascular and ROM check of distal extremity:
    - radial pulse and capillary refill
    - check sensation in three distributions in hand (e.g., thenar eminence, little finger, and back of web space of thumb), and in forearm, and in "patch" area over shoulder; document
    - check active range of motion (have patient try to perform)
    - check motor strength in three distributions in hand (finger-spreading, thumb/little-finger opposition, holding fingers extended against resistance)
- Students will see instructors perform a simulated shoulder reduction, and then

practice shoulder reduction, on a (simulated) team member who slipped and hit outstretched hand against tree; patient has had dislocations before and has self-diagnosed:

- Position patient properly (on back, with arm extended and externally rotated; "throwing a baseball") and position assistant (on opposite side, with sling around patient's chest for countertraction.)
- Apply proper amount of force (verbalize this is half of force to be used in actuality); apply slowly and gently yet firmly increase force, and stop if patient indicates markedly increasing pain; generally at 30°-45° angle higher than lateral unless patient comfort directs otherwise; use "figure 8 sling" on elbow
- Verbalize: that this is to be continued for 15 minutes; verbalize that additional elevation may be tried.
- Once it is reduced, place arm across chest and immobilize.
- Repeat entire neurovascular check.

## Checklist

- Ask: verbalize **criteria for diagnosing** shoulder dislocation:
    - proper **mechanism** of injury (indirect injury)\*
    - can't bring arm across chest** to opposite shoulder\*
    - WEMT can see and feel a "notch and hole" on **exam** of the shoulder\*
  - Ask: verbalize **criteria for attempting reduction** in the field
    - must be **long** transport time, and must have on-line command or standing orders; or,
    - if can't evacuate patient unreduced (e.g., small passage)
    - if absent neuro or vascular status
    - so patient can self-rescue, if required for **safety**
  - Ask: verbalize advantages and disadvantages of **hanging traction vs. direct reduction.**
  - Tell student: no location nearby for hanging traction so must use direct method; perform shoulder reduction on (simulated) team member who slipped and hit outstretched hand against tree; patient has had dislocations before and has self-diagnosed; perform technique and verbalize as needed:
    - Verbalize use of **medication and/or suggestion**/guided imagery/hypnosis as appropriate\*
    - Neurovascular and ROM** check (sequence not required)
      - radial **pulse and capillary refill**\*
      - sensation in three distributions in hand (thenar eminence, little finger, and back of web space of thumb), forearm, and "patch" area over shoulder; document\*
      - active range of motion (student asks patient to try)
      - motor strength in three distributions in hand (finger-spreading, thumb/little-finger opposition, holding fingers extended against resistance)\*
    - Position** patient properly (on back, with arm extended and externally rotated; "throwing a baseball") and position assistant on opposite side, with sling around patient's chest for countertraction.\*
    - Apply proper amount of force\* (verbalize this is half of force to be used in actuality); apply slowly and gently yet firmly increase force, and stop if patient indicates markedly increasing pain; generally at 30°-45° angle higher than lateral unless patient comfort directs otherwise; use "figure 8 sling" on elbow; verbalize danger of impairing circulation with sling
    - Ask student to verbalize roughly **how long** this is to be continued: 15 minutes
    - Ask student to verbalize additional **options** if doesn't seem to be working: acceptable answers: more elevation of arm, manipulation of humeral head, medication, other methods
    - Once reduced, place arm across chest and **immobilize**.\*
- Repeat entire neurovascular **check**.\*