



**REGION 11
CHICAGO EMS SYSTEM
PROCEDURE**

Title: Pleural (Needle) Decompression
Section: Trauma Management
Approved: EMS Medical Directors Consortium
EMS Level: ALS

PLEURAL (NEEDLE) DECOMPRESSION

INDICATIONS

This procedure is to be used for patients with:

- Evidence of thoracic trauma AND:
 1. Traumatic arrest OR
 2. Signs of tension pneumothorax (all of the following):
 - a. Hypotension (systolic blood pressure < 90 mmHg) AND
 - b. Respiratory distress or respiratory failure AND
 - c. Absent or diminished breath sounds on the affected side
- Suspected tension pneumothorax in non-traumatic cardiac arrest (e.g. PEA arrest with subcutaneous emphysema)

CONTRAINDICATIONS

- Isolated, decreased breath sounds without hypotension and respiratory distress

EQUIPMENT

- Adult: 14 gauge x 3.25 inch over the needle catheter or Air Release System (ARS)
- Pediatric: 16-18 gauge x 1.5-2 inch over the needle catheter
- Alcohol prep pad

PROCEDURE

1. Apply personal protective equipment (gloves).
2. Palpate the chest locating the second intercostal space on the midclavicular line (between the 2nd and 3rd ribs) on the same side as the injury.
3. Properly cleanse the insertion site with alcohol prep pad.
4. Insert the needle at a 90-degree angle to the chest wall, just over the top of the 3rd rib in the midclavicular line.
5. Listen for rush of air.
6. Remove needle leaving only the catheter in place.
7. Dispose of the needle in the proper container.
8. Reassess for improvement in patient condition.