

PURPOSE: The purpose of this policy is to provide a method to relieve trapped air in the pleural space.

AUTHORITY: Health and Safety Code, Division 2.5, Section 1797.220; Title 22, Chapter 4, California Code of Regulations.

POLICY:

I. Needle thoracostomy is a skill included in the paramedic basic scope of practice in California.

II. INDICATIONS

A. Suspicion of tension pneumothorax, which may present with some of the following signs:

1. Severe dyspnea and/or difficulty with ventilation, especially with an intubated patient
2. Altered level of consciousness and/or agitation
3. Absent or unequal breath sounds on affected side
4. Signs of shock
5. Hyperresonance to percussion on the affected side
6. Tracheal shift away from the affected side—difficult to assess in many patients and usually a late sign
7. Neck vein distention
8. Paradoxical movement of the chest

III. EQUIPMENT

- A. #10 gauge angiocath or other appropriate over the catheter needle
- B. 12 ml syringe

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EMS Administrator

- C. Heimlich valve or similar one-way valve device

IV. PROCEDURE

- A. Introduce either angiocath or other appropriate over the needle catheter (attached to 12 ml syringe) just above the second rib margin in the midclavicular line during expiration.
- B. Continue until lack of resistance or "pop" as needle enters pleural space.
- C. Once air returns under pressure or is aspirated with ease
 - 1. Remove plunger;
 - 2. Listen for air escaping.
- D. Once air has ceased escaping
 - 1. Remove syringe barrel from needle;
 - 2. Advance the catheter.
- E. Secure catheter with needle guard or tape.
- F. Attach one-way valve device or Heimlich valve with **blue** end toward patient.

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