



**NEEDLE THORACOSTOMY: ADULT / ADOLESCENT**

**INDICATION:**

Decompression of tension pneumothorax causing hemodynamic instability in a chest injury victim.

**SIGNS AND SYMPTOMS OF TENSION PNEUMOTHORAX CAUSING HEMODYNAMIC INSTABILITY:**

Signs include:

- Chest injury, either blunt or penetrating (often with flail chest, palpable subcutaneous air, or “sucking” chest wound on side of suspected pneumothorax).
- Absence of breath sounds on the side of the suspected pneumothorax (if breathing); while presence of breath sounds on side without pneumothorax.
- Distended neck veins.

Symptoms include:

- Progressive dyspnea or respiratory arrest
- Circulatory collapse, manifested by hypotension or signs of poor perfusion

**PROCEDURE:**

- Base Contact (if in the setting of an MCI, remote rescue, or tactically unstable scene proceed without base contact and document).
- Explain procedure to patient if conscious.
- Assemble equipment:
  - √ 3.25 inch ARS chest decompression needle (10 G, catheter over needle); or 14 G, minimum 2.5 inch catheter over needle
  - √ Antiseptic skin wipes
  - √ Sterile Vaseline gauze or 4” X 4” dressings and tape
- Identify second intercostal space, midclavicular line.
- Prepare site with sterile skin wipe.
- Insert needle using steady pressure and ninety degree angle (perpendicular) to chest wall in lower aspect of the second intercostal space within the midclavicular line.
- Advance needle until one of the following are recognized:
  - A sudden rush of air is expelled through the needle
  - A “popping” or “giving way” is felt as the tip of the needle enters the chest cavity
  - Blood or fluid is expelled through the needle
- Remove needle and leave catheter in place (do not reinsert needle into catheter due to risk of shearing apart plastic catheter).
- Secure catheter with Vaseline gauze alone or 4” X 4” dressing and tape.
- Assess and document any improvement in respiratory status and hemodynamic status.

Approved:

TxGuide2016:  
Revision Dates: 3/2008, 11/2016  
Implementation Date: Nov 01, 2016  
OCEMS copyright © 2016