

## CHEST DECOMPRESSION

### GENERAL CONSIDERATIONS

- A. Clinical signs of a tension pneumothorax include:
  - 1. Dyspnea
  - 2. Anxiety
  - 3. Tachypnea
  - 4. Distended neck veins
  - 5. Possible tracheal deviation away from the affected side (late sign)
  - 6. Diminished or absent breath sounds on affected side
  - 7. Hyper-resonance on affected side when percussed
  - 8. Shock with hypotension
  - 9. Decreased lung compliance in the intubated patient
  
- B. The treatment of a tension pneumothorax involves decompression of the affected chest cavity to release the pressure that has developed.
  
- C. Indications for performing emergency decompression is the presence of tension pneumothorax with decompensation as evidenced by more than one of the following:
  - 1. Respiratory distress and cyanosis
  - 2. Loss of radial pulse (late shock)
  - 3. Decreasing level of consciousness
  
- D. Procedure:
  - 1. Equipment
    - i. Adult use 14 gauge, 3.25 inch needle
    - ii. Pediatric use 16-18 gauge, 2 inch needle
  
  - 2. Locate site:
    - 1<sup>st</sup> choice = 4<sup>th</sup> or 5<sup>th</sup> intercostal space, anterior-axillary line = Site C
    - 2<sup>nd</sup> choice = 2<sup>nd</sup> intercostal space, mid-clavicular line = Site A



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3. If time permits, prep site with antiseptic solution
4. Insert the needle just over the top of the rib at a 90° angle to the rib. As the needle enters the pleural space, there will be a “pop”. If a tension pneumothorax is present, there will be a hiss of air as the pneumothorax is decompressed
5. Advance the catheter into the skin and remove the needle.
6. Secure the catheter in place
7. Support with 100% oxygen and transport without delay

14-gauge, 3.25-inch angiocath

