

**ILLINOIS REGION 3 PROTOCOLS****NEEDLE CHEST DECOMPRESSION (ALS)**

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- I. Indications: Signs of a tension pneumothorax which may include any or all of the following:
- A. Absent or diminished lung sounds on the affected side
  - B. Progressive respiratory distress and/or increased resistance to bagging
  - C. Tracheal deviation
  - D. Jugular vein distention
  - E. Signs of shock with chest trauma present
- II. Potential complications:
- A. Creation of a pneumothorax if not already present
  - B. Laceration of blood vessels and nerves
  - C. Laceration of the lung
  - D. Infection from poor aseptic technique
- III. Precautions:
- A. A tension pneumothorax can be precipitated by sealing an open chest wound with an occlusive dressing. This should be checked first to relieve the tension pneumothorax.
  - B. Nerves and blood vessels exist just below each rib. To avoid these you should always insert the needle just over the top of the 3<sup>rd</sup> rib.
- IV. Equipment:
- A. 14 gauge or larger IV catheter, at least 3.25 inches long
  - B. Alcohol or Betadine prep pads
  - C. 10 cc syringe
  - D. Tape
- V. Procedure:
- A. Attach the 10 cc syringe to the IV catheter
  - B. Locate the 2nd intercostal space mid-clavicular line
  - C. Cleanse the site with alcohol or Betadine
  - D. Insert the IV catheter at the superior border of the 3rd rib
  - E. Push the needle until you feel a pop as you enter the pleural space
  - F. The plunger of the syringe will be pushed outward by pressurized air exiting the chest
  - G. Advance the catheter over the needle until it is flush with the skin
  - H. Discard the needle
  - I. Secure the catheter in place with tape
  - J. Reassess ventilatory rate status, jugular veins, tracheal position, pulse, blood pressure

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Blessing Hospital, EMS Medical Director

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St Johns Hospital, EMS Medical Director

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