

SKILLS: NEEDLE THORACOSTOMY

Name: _____ **Date:** _____ **Cert #** _____

Tension pneumothorax is defined as air under pressure in the pleural space. Needle thoracostomy should be performed to aid in a rapidly deteriorating adult or pediatric patient with severe respiratory distress.

A. Assessment/Treatment Indicators:

1. Restlessness, anxiety, or decreased LOC.
2. Diminished or absent breath sounds on the affected side.
3. Possible tracheal deviation away from the affected side (late sign).
4. Shock syndrome (weak rapid pulse, hypertensive initially, with hypotension a late find).
5. Distended neck veins (JVD).
6. Progressively worsening dyspnea/cyanosis.

B. Possible complications:

1. Conversion from a closed pneumothorax to an open one
2. If there is not a pneumothorax, insertion of a needle will produce a pneumothorax.
3. Laceration of the lung or laceration of the intercostal vessels

EQUIPMENT:

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Betadine swab 2. Tape 3. Benzoin tincture 4. Adult: 12 -16 ga needle, 2-2 ½" over-the-needle catheter | <ol style="list-style-type: none"> 5. Flutter or Heimlich Valve 6. Pediatric (less than 50 kg): 18g, 1 – 1 ¼" over-the-needle catheter 7. BVM |
|---|--|

Performance Criteria	Met Initials	<u>Not Met</u> Initials	Comments
1. Uses universal precautions.			
2. States indications and contraindications of procedure.			
3. Assembles equipment			

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Performance Criteria, cont.		Met Initials	<u>Not Met</u> Initials	Comments
4.	Locates insertion site at the second intercostal space, mid-clavicular line or the fourth intercostal space at the midaxillary line.			
5.	Firmly inserts the needle (attached to syringe) perpendicular to the chest wall, over the top of the rib until pleura is penetrated as indicated by one or more of the following: <ul style="list-style-type: none"> ➤ A “popping sound” is heard, or giving away sensation is felt. ➤ A “hissing” noise follows evidence of a tension pneumothorax. ➤ Ability to aspirate free air or blood into the syringe. 			
6.	Advances the catheter and removes needle and syringe. Adds flutter or Heimlich Valve to prevent re-accumulation of air in the pleural space.			
7.	Secures needle hub in place with tape over Benzoin or with other approved device.			
8.	Reassesses patient lung sounds, respiratory status immediately, and every five (5) minutes thereafter.			
9.	Considers the following: <ul style="list-style-type: none"> ➤ The procedure may have to be repeated if the tension is not relieved. ➤ Air transport: The needle thoracostomy should be done prior to takeoff to allow for escape of air that may accumulate in the pleural space with atmospheric pressure changes. 			

VALIDATOR’S SIGNATURE	ALS PROVIDER’S SIGNATURE	DATE

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