



Pleural Decompression

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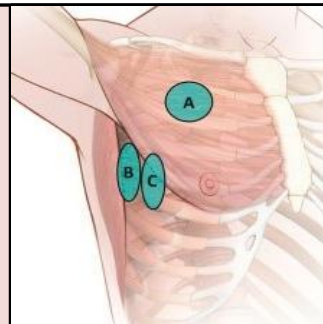
Next Review: 01/2028

INDICATIONS

- Suspected tension pneumothorax with a history of chest trauma, unilateral absent or diminished breath sounds & one or more of the following:
 - Severe respiratory distress with SpO₂ <94% - SBP ≤90 or loss of radial pulse - Traumatic cardiac arrest

PRE-PROCEDURE

- Assess respiratory status
- Manage airway & assist ventilations as appropriate
- Administer high flow O₂ & monitor SpO₂
- Assess & continually monitor vital signs
- Identify & cleanse/prep site - approved sites (in preferred order):
 - A** – Mid-clavicular line, 2nd intercostal space
 - B** – Mid-axillary line, 4th/5th intercostal space (above nipple line)
 - C** – Anterior axillary line, 5th intercostal space (above nipple line)



PROCEDURE

Capnospot® Pneumothorax Decompression Indicator:

- Use a minimum 14g x 3.25" needle/catheter specifically designed for pleural decompression
- Attach Capnospot Pneumothorax Decompression Indicator to needle/catheter prior to insertion
- Penetrate the skin, advancing needle/catheter with at a 90° angle, over the superior border of the rib
- Advance needle/catheter through the chest wall until a positive indication of CO₂ is observed via Capnospot or a “pop” is felt upon entering the pleural space
- Hold the decompression device in place for approx. 10 secs & observe for visible color change in the Capnospot indicator chamber (note: color change may not be reliable on pts with an open pneumothorax)
- Advance catheter hub of the decompression device over the needle to the plane of the pt’s skin
- Remove needle after catheter has been fully inserted
- Remove Capnospot from the needle & reapply the Capnospot to the catheter for ongoing assessment

Simplified Pneumothorax Emergency Air Release (SPEAR®) Procedure:

- Insert SPEAR needle/catheter through skin targeting selected rib (below level of intended insertion site)
- Place needle tip against exterior rib and confirm position – direct SPEAR over the rib and into thoracic cavity
- Penetrate thoracic cavity – extending SPEAR approx. 3 cm beyond exterior of target rib
- Direct needle tip toward middle of clavicle
- Release catheter from needle by disconnecting Spin Lock
- Advance only the catheter toward middle of clavicle using needle as stationary guide
- Remove needle after catheter has been fully inserted

- Adequately secure catheter & observe for clinical indicators of successful placement
- If an initial attempt at one approved site is unsuccessful, consider utilizing an alternate approved site
- Two attempts allowed on affected side(s) without base/modified base hospital contact

POST-PROCEDURE

- Reassess breath sounds & administer high flow O₂
- Continuous cardiac, SpO₂ & EtCO₂ monitoring
- Assess & document vital signs every 3 - 5 mins (if possible)
- Monitor Capnospot® (if used) & breath sounds for signs of development of tension pneumothorax