

Needle Decompression

Applies to:

P Paramedic

Clinical Indications:

1. Patients who are exhibiting signs of a tension pneumothorax and have at least one of the following signs:
 - a. AMS
 - b. Hypotension
 - c. Increased pulse and respirations
 - d. Absent breath sounds or hyperresonance to percussion on affected side
 - e. Jugular vein distension
 - f. Difficulty ventilating
 - g. Tracheal shift
 - h. In patients with penetrating trauma to the chest or upper back, or gunshot wound to the neck or torso who are in respiratory distress, a weak or absent radial pulse may be substituted for blood pressure measurement as listed above; signs of tension pneumothorax listed above may also be present.
 - i. Patients in traumatic arrest with chest or abdominal trauma for whom resuscitation is indicated. These patients may require bilateral chest decompression even in the absence of the signs above.

Procedure:

1. Administer high flow oxygen.
2. Identify and prep the site:
 - a. Locate the second intercostal space in the mid-clavicular line on the same side as the pneumothorax.
 - b. Prepare the site with chlorhexidine and allow to air dry.
3. Insert a 14g catheter into the skin over the third rib and direct it just over the top of the rib (superior border) into the interspace.
4. Advance the catheter through the parietal pleura until a “pop” is felt and air or blood exits under pressure through the catheter, then advance catheter only to chest wall.
5. Remove the needle, leaving the plastic catheter in place.
6. Secure the catheter hub to the chest wall with an Asherman chest seal. The catheter should be stabilized within the flutter valve mechanism.

