



# Needle Thoracostomy

ALS PROCEDURE AP-05

INDICATION	<ul style="list-style-type: none"> <li>• Tension pneumothorax, characterized by an air leak into pleural space through a hole in the lung, acting as a one-way valve.</li> <li>• Assessment confirmed by hypotension, tachycardia, and by at least one of the following:             <ul style="list-style-type: none"> <li>• Decreased breath sounds, unilaterally or bilaterally.</li> <li>• Extreme dyspnea associated with low SPO<sub>2</sub>.</li> <li>• Neck vein distension.</li> <li>• Agitation.</li> <li>• Possible cyanosis.</li> <li>• Tracheal shift away from affected side (Late sign, can be difficult to detect).</li> </ul> </li> <li>• Traumatic arrest with thoracic injury.</li> </ul>
PROCEDURE	<ul style="list-style-type: none"> <li>• Locate and clean the insertion site with chlorhexidine swabs.</li> <li>• Insert the angiocatheter into 1 of 2 sites:             <ul style="list-style-type: none"> <li>• The 2<sup>nd</sup> intercostal space on the mid-clavicular line, penetrating over the 3<sup>rd</sup> rib at a 90° angle to the chest wall on the affected side; or</li> <li>• The 4<sup>th</sup> or 5<sup>th</sup> intercostal space in the mid-axillary line, penetrating over the 5<sup>th</sup> or the 6<sup>th</sup> rib at a 90° angle to the chest wall on the affected side (pull the pectoralis muscle forward and insert needle adjacent to your middle finger).</li> </ul> </li> <li>• Advance the needle until lack of resistance or “pop” as needle enters pleural space, followed by a possible hiss of air.</li> <li>• While holding the angiocatheter, advance the catheter all the way to the hub and remove the needle.</li> <li>• Secure catheter with needle guard or tape.</li> <li>• Attach connecting tubing.</li> <li>• Attach one-way valve device.</li> </ul>
KEY CONCEPTS	<ul style="list-style-type: none"> <li>• In patients where cannulation into the pleural space is not probable / possible (e.g. bariatric patients), contact the base hospital for on-line medical control regarding a possible procedure site variation.</li> </ul>