

	Department Name Address	ALS	Paramedic
		Revision #	
		Implementation Date	
Protocol	2.0.7 Needle Thoracentesis / Chest Tube Insertion	Last Reviewed/Update Date	
Author / Owner		Medical Director	

NEEDLE THORACENTESIS / CHEST TUBE INSERTION

A needle decompression and/or a chest tube should be considered if any of the following indications are present in the trauma patient:

- Patients with decreased or absent breath sounds, and exam/condition consistent with pneumothorax, or tension pneumothorax.
- Patients with shortness of breath, air hunger, and/or respiratory distress.
- Subcutaneous air is present.
- Tracheal deviation and/or JVD is noted.
- Patient with known chest injury.

Needle Decompression

- Assess respiratory status and perform chest exam.
- Maintain airway per protocol.
- Identify land marks – 2nd intercostal space midclavicular on the affected side of the chest.
- Surgically cleans area.
- Locally anesthetize with Lidocaine if circumstances permit.
- Insert a 14-gauge over-the-needle catheter into the skin and direct the needle just over the rib into pleural space.
- Remove needle and listen for air to escape.
- Secure catheter in place and dress site.
- Reassess patient and prepare for a chest tube insertion PRN.

Chest Tube Insertion (note: chest tube insertion is an advanced procedure not every Paramedic is trained to do. The Paramedic must have substantial additional training to be competent in this skill.)

- Assess respiratory status and perform chest exam.
- Provide high flow oxygen or secure airway and ventilate as necessary.
- Identify landmarks – 5th intercostal space anterior to the midaxillary line on the affected side of the chest.
- Surgically cleans area.
- Locally anesthetize site with Lidocaine and consider sedation / pain management if circumstances permit.

- Make a 3cm transverse incision at the identified site and bluntly dissect through the subcutaneous tissue, just over the top of the rib.
- Puncture the parietal pleura with the tip of a clamp and place a gloved finger into incision to prevent injury to other organs and to clear adhesions, clots, etc.
- Using clamp on thoracostomy tube insert tube into pleural space to a desired length.
- Look for fogging of tube, blood returns, and reassess patient.
- Connect thoracostomy tube to either drainage system or a Heimlich valve.
- Secure tube in place by suturing, stapling, towel clip, and/or tape.
- Dress site with sterile dressing.
- Continue to assess patient and monitor.

Medical Director's Signature

Date

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