

COLLAPSED LUNG: TENSION PNEUMOTHORAX - EMERGENCY

(ISS MED/3A - ALL/FIN)

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CAUSES

Rupture of lining of lung (spontaneous or due to rapid pressure change)
Chest trauma
CPR/assisted ventilation

SYMPTOMS

Difficulty breathing
Chest pain
Air hunger
Anxiety

SIGNS

Rapid breathing rate
Respiratory distress
Rapid heart rate
Distended neck veins
Decreased breath sounds on affected side of chest
Over-inflated chest wall on affected side
Low blood pressure
Displacement of trachea away from affected side of body
Cyanosis (bluish discoloration of skin due to lack of O₂)

ASSESSMENT

ALSP
(red)

1. Monitor pulse, O₂ saturation with Pulse Oximeter (Assessment-1), respiratory rate, skin color, symptoms/signs.
Pulse Oximeter reading of less than 95 % saturation indicates serious respiratory impairment.
2. Contact Surgeon.
3. If unable to contact Surgeon and symptoms persist or worsen, continue with procedure.

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TREATMENT

- ALSP
(red)
1. Unstow:
 - Gloves, Non-Sterile (Airway-4,5,6)
 - Tape (Airway-18)
 - Alcohol Pads (Airway-21)
 - Catheter, 14G (Airway-24)
 - Syringe, 10cc (Airway-12)
 - Chest Drain Valve (Airway-1)
 - Xylocaine with Epinephrine (Lidocaine with Epinephrine)
(Emergency Surgery-4)
 2. Optional for local anesthesia, if time permits and patient conscious give Xylocaine with Epinephrine (Lidocaine with Epinephrine) (Emergency Surgery-4).
 3. Locate site for Needle/Catheter insertion.
Refer to Figure 1.

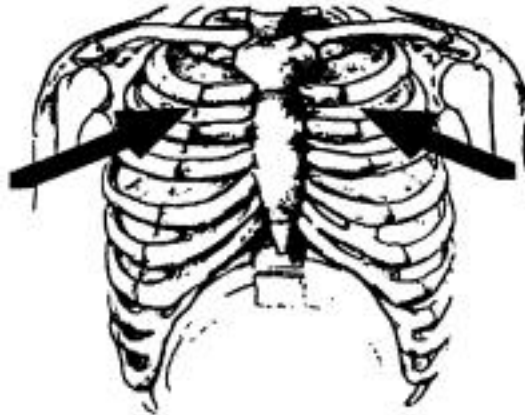


Figure 1.- Needle/Catheter Insertion Sites.

- 3.1 Second intercostal (rib) space, just above third rib
- 3.2 Lined up with middle of clavicle (collar bone)
- 3.3 At least 2 cm to side of sternum (breast bone)
4. Don Non-Sterile Gloves and cleanse overlying skin with an Alcohol Pad.

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5. Local Anesthesia (optional)

(optional) 5.1 Insert Xylocaine with Epinephrine (Lidocaine with Epinephrine) Cartridge into syringe (Emergency Surgery-4). Refer to {INJECTIONS - TUBEX INJECTOR} (SODF: ISS MED: INJECTIONS/IV).

(optional) 5.2 Anesthetize thoracentesis site by injecting Xylocaine with Epinephrine (Lidocaine with Epinephrine) into skin and underlying tissue.

5.3 Before injecting, pull cartridge back.
If blood obtained, withdraw needle, expel blood onto Gauze Pad, and reinsert.

ALSP (red) 6. Remove end cap from 14G Catheter (Airway-24). Insert 14G Catheter through chest wall at designated site, holding needle perpendicular to skin. Be sure to enter just above rib, not below bottom of rib.

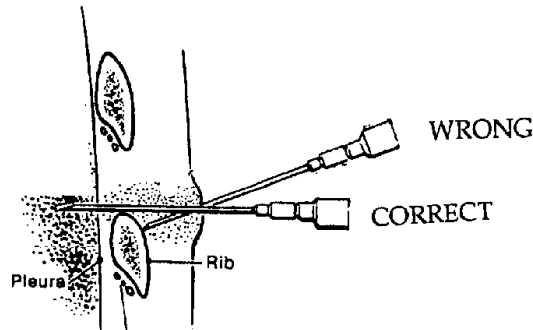


Figure 2.- Side View of Intracatheter Insertion.

7. Entry into correct space will be evident by hearing or feeling escape of air through open needle.
8. Hold Catheter in place and remove needle.
9. Tape Catheter securely in place on chest wall.



Figure 3.- Catheter Taped Securely in Place on Chest Wall.

10. When time permits, attach Chest Drain Valve (ALSP, Airway-1) and Connecting Tube to Catheter and tape securely in place. Refer to Figure 4 for set-up.



Figure 4.- Chest Drain Valve Connected to Catheter.

NOTE

Arrow on valve should point away from patient.

- 10.1 If fluid present in Chest Drain Valve, disconnect Connecting Tube from Catheter and replace with 10cc Syringe (Airway-12) (remove and discard clear cap from Syringe).
- 10.2 Withdraw any fluid as needed.
If Syringe fills, expel contents into Ziplock Bag (ALSP-7) and reattach Syringe, removing all fluid if possible.
- 10.3 Reconnect Connecting Tube and Chest Drain Valve when complete.

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- 11. Continue to provide ventilatory support as needed.
Refer to {**CARDIOPULMONARY RESUSCITATION: CPR - VENTILATORY SUPPORT - EMERGENCY**} (SODF: ISS MED: EMERGENCY).
- 12. Continue to monitor patient's respiratory rate, heart rate, blood pressure, O2 pulse oximetry, skin color, and other signs/symptoms.

	Time (minutes)	0	5	10	15	20	25	30
	Respiratory Rate							
ALSP	Blood Presssure (ALSP-1)							
	Skin color							
ALSP	Pulse Oximeter (Assessment-1)							

- 13. Contact Surgeon.