

Common EMT Emergencies

Respiratory Emergencies

Emphysema (COPD): In emphysema, the lung tissue loses its elasticity, the alveoli become distended with trapped air, and the walls of the alveoli are destroyed. Loss of the alveolar wall reduces the surface area in contact with pulmonary capillaries. Therefore, a drastic disruption in gas exchange occurs, and the patient becomes hypoxic and begins to retain carbon dioxide. The loss of lung elasticity and trapping of air cause the chest to increase in diameter, producing the barrel-chest appearance.

Signs and Symptoms of Emphysema (SOB):

- Pursed-lip breathing
- Extreme difficulty of breathing on minimal exertion
- Pink complexion (These patients are often called “pink puffers.”)
- Tachypnea (breathing rate usually greater than 20 per minute at rest)
- Tachycardia
- Tripod position
- + Accessory muscle use in the mid-clavicular wells
- May be on home oxygen
- Low Spo2% (Pulse Oximetry)
- ETCO2 Readings will be high. Normal Range is 35-45. Expect their numbers to be in the 50's and above. End-Tidal CO2 is a measurement of how Carbon Dioxide is in the blood. ALS Skill but Very simple concept to understand therefore we want you to understand it. Easy!

BLS Treatment for Emphysema:

- High Flow Oxygen via Non-rebreather mask at 15 LPM hooked up to 100% Oxygen
- Placing Pt. in position of comfort when appropriate
- Always Upgrade ALS. Identify when Vitals are abnormal, Decreased Level of Consciousness, etc.
- Serial Vitals q 3-5 minutes and notice trends of pt improvement or deterioration
- Obtain A (SAMPLE) History during the secondary exam after Oxygen has been administered, Vitals are delegated, and We have upgraded ALS.
- May assist patient with Metered Dose Inhaler (MDI) if S&S warrant treatment (Beta-2 Agonist/ Bronchodilator)
- Replace High flow oxygen @ 15 LPM
- Always be sure to follow 5 rights for Medication administration and assistance
- Get Serial Lung sounds in minimum of 4 places
- Reassess vitals q 3-5 minutes and pay close attention to lung sounds and for signs of Improved air exchange and wheezes should be diminished if not gone
- Wait for ALS to arrive!

Chronic Bronchitis: In chronic bronchitis, the alveoli remain unaffected by the disease, but inflamed and swollen bronchioles and thick mucus restrict airflow to the alveoli so that they do not expand fully, causing respiratory distress and possible hypoxia. Recurrent infections leave scar tissue that further narrows the airway. A major problem with chronic bronchitis is the swelling and thickening of the lining of the lower airways and an increase in mucus production. The airways become very narrow, causing a high resistance to air movement and chronic difficulty in breathing.

Signs and Symptoms of Chronic Bronchitis:

- Typically overweight
- Chronic cyanotic complexion (They are often called “blue bloaters”.)
- Difficulty in breathing, but less prominent than with emphysema
- Vigorous productive chronic cough with sputum
- Coarse rhonchi usually heard upon auscultation of the lungs
- Wheezes and possibly crackles at the bases of the lungs
- Respiratory infections that lead to more acute episodes

BLS Treatment for Chronic Bronchitis:

- High Flow Oxygen via Non-rebreather mask at 15 LPM hooked up to 100% Oxygen
- Placing Pt. in position of comfort when appropriate
- Always Upgrade ALS. Identify when Vitals are abnormal, Decreased Level of Consciousness, etc.
- Serial Vitals q 3-5 minutes and notice trends of pt improvement or deterioration
- Obtain A (SAMPLE) History during the secondary exam after Oxygen has been administered, Vitals are delegated, and We have upgraded ALS.
- May assist patient with Metered Dose Inhaler (MDI) if S&S warrant treatment
- Replace High flow oxygen @ 15 LPM
- Always be sure to follow 5 rights for Medication administration and assistance
- Get Serial Lungs sounds in minimum of 4 places
- Reassess vitals q 3-5 minutes and pay close attention to lung sounds and for signs of Improved air exchange and wheezes should be diminished if not gone
- Wait for ALS to arrive!

Asthma: The following conditions in the asthma patient contribute to the increasing resistance to air flow and difficulty in breathing: bronchospasm, edema, and increased secretion of mucus that causes plugging of the smaller airways. Asthma patients usually suffer acute, irregular, periodic attacks but between the attacks usually have either no or very few signs or symptoms. Status asthmaticus is a prolonged life-threatening attack producing inadequate breathing and severe signs and symptoms. It does not respond to either oxygen or medication and requires immediate and rapid transport to the hospital.

Signs and Symptoms of Status Asthma:

- Dyspnea that may progressively worsen
- Nonproductive cough
- Wheezing on auscultation (typically expiratory)
- Tachypnea
- Tachycardia
- Anxiety and apprehension
- Typical allergic signs and symptoms: runny nose, sneezing, red or bloodshot eyes, stuffy nose
- Chest tightness
- + Accessory Muscle Use at Mid-clavicular wells
- SpO₂ less than 95 percent before oxygen administration

BLS Treatment for Status Asthma:

- High Flow Oxygen via Non-rebreather mask at 15 LPM hooked up to 100% Oxygen
- Placing Pt. in position of comfort when appropriate
- Always Upgrade ALS. Identify when Vitals are abnormal, Decreased Level of Consciousness, etc.
- Serial Vitals q 3-5 minutes and notice trends of pt improvement or deterioration
- Obtain A (SAMPLE) History during the secondary exam after Oxygen has been administered, Vitals are delegated, and We have upgraded ALS.
- May assist patient with Metered Dose Inhaler (MDI) if S&S warrant treatment
- Replace High flow oxygen @ 15 LPM
- Always be sure to follow 5 rights for Medication administration and assistance
- Get Serial Lungs sounds in minimum of 4 places
- Reassess vitals q 3-5 minutes and pay close attention to lung sounds and for signs of Improved air exchange and wheezes should be diminished if not gone
- Wait for ALS to arrive!

Acute Pulmonary Edema: Cardiogenic pulmonary edema is typically related to an inadequate pumping function of the heart that drastically increases the pressure in the pulmonary capillaries. This forces fluid to leak into the space between the alveoli and capillaries and, eventually, into the alveoli themselves. Congestive Heart Failure causes Pulmonary Edema primarily. The previous respiratory diseases are NOT due to a failing heart. You may also see Acute Pulmonary Edema with submersion events (drowning) or aspiration of emesis. S&S will be the same for the most part. Distinct difference with CHF is the rapid irregular heart rate and hypertension.

Signs and Symptoms of Pulmonary Edema:

- Dyspnea, especially on exertion
- Difficulty in breathing when lying flat (orthopnea) check for multiple pillows or pt may sleep in lazy-boy.
- Frothy sputum
- Tachycardia
- Anxiety, apprehension, combativeness, confusion due to hypoxia (pt is drowning in their own fluids)
- Tripod position with legs dangling
- Fatigue
- Crackles and possibly wheezing on auscultation
- Cyanosis or dusky-color skin
- Pale, moist skin
- Distended neck veins
- Swollen lower extremities (pedal edema, sacral edema) Check sacral area when you listen to lungs
- Symptoms of cardiac compromise
- SpO₂ less than 95 percent

BLS Treatment for Pulmonary Edema:

- High Flow Oxygen via Non-rebreather mask at 15 LPM hooked up to 100% Oxygen
- Placing Pt. in High-Folwers position is a priority
- Have suction unit ready
- Always Upgrade ALS. Identify when Vitals are abnormal, Decreased Level of Consciousness, etc.
- Serial Vitals q 3-5 minutes and notice trends of pt improvement or deterioration
- Obtain A (SAMPLE) History during the secondary exam after Oxygen has been administered, Vitals are delegated, and We have upgraded ALS.
- Reassess all vitals and prepare for BVM if pt begins to deteriorate further. Pt may be so tired that they can no longer hold their head upright. This is a good time to start Bagging the pt with an OPA if no gag present.
- Assist ALS when they get on scene, pt may need intubation right away.