



# Emergency Medical Training Services

Emergency Medical Technician – Basic Program Outlines

Outline Topic: **RESPIRATORY EMERGENCIES**

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Revised: 11/2013

## DEFINITIONS

- Ventilation - chest movement.
- Respiration - air in and out.
- ABG - arterial blood gasses - take blood and analyze it for saturation.
- Pulse-Ox - goes on finger.
- Hypoxia - low O<sub>2</sub> available.
- Hypoxemia - low O<sub>2</sub> in blood stream.
- Dyspnea - difficult breathing.
- Artificial Ventilations - breathing for them.

## A&P

- Normal people breathe off of CO<sub>2</sub> not O<sub>2</sub>.
- 21% O<sub>2</sub> in air.

## Respiratory Rate/Quality

- Adult 12-20, Child 15-30, Infant 25-50
- Should be quiet, effortless with equal chest rise.

- Terms: Seesaw, nasal flaring, tripod, sniffing, wheezing, rales, rhonchi, stridor, gurgling, snoring, unequal chest rise, no chest rise.

## Breath Sounds

- Refer to Assessment outline.

## Artificial Ventilation

- Stop Breathing or any one who cannot maintain oxygen levels.
- Less than 8 or over 30 (with poor patient presentation) ventilations per minute need artificial.
- Override breathing - when patient breathes in provide greater tidal volume.

## Medication

- Oxygen.
- MDI Albuterol.
- Neb Albuterol.
- Albuterol is a beta agonist working primarily on beta 2 and side effects of beta 1.

## Asthma

- Lower airway reversible narrowing.
- Wheezing.

- Caused by irritant (trigger).
- First attack is constriction of lower airway. Second attack is fluid swelling to lower airway.
- Status Asthmaticus is an attack that cannot be broken by common means.

#### Pulmonary Embolism

- Embolism (traveling clot/plaque and gets stuck in lung blood vessels) blocks blood flow in pulmonary vessels.
- Sudden onset Dyspnea.
- Occurs: after/during surgery, after birth given, mixing birth control and smoking.
- Place on left side if needed.

#### Spontaneous Pneumothorax

- Weakened lung tissue that is thin. People with lung diseases, infections scar the lung tissue and make it thin.
- Tall white skinny males prone to this. They grow too fast and make lungs thin.
- Lung tissue ruptures and air leaks into plural space in the chest cavity - collapsing the lung.
- Usually not life threatening.
- S/S - first anxiety, then SOB, decreased lung sounds on leaking side, then affected chest rise on affected side.

Infections (This is only an overview. You must put it all together. THEIR ARE EXCEPTIONS)

- URI and LRI.
- URI can turn into LRI if untreated.
- Virus comes on slow. Bacterial come on faster.
- Virus no or mild fever. Bacterial fever.
- Virus clear drainage. Bacterial colored drainage.
- Bacteria redness. Virus mild or no redness.

COPD (Chronic Obstructive Pulmonary Disease)

- Chronic asthma, chronic bronchitis, emphysema.
- Chronic Bronchitis is blue bloater, obese, grunting, breath holder.
- Emphysema is pink puffer, skinny, barrel chest. Club fingers.
- Bronchitis is over stimulated discharge of mucus in bronchus tubes.
- Emphysema is loss of elasticity of alveoli.
- Long term problem is hypoxic drive. Start to control breathing with O2 levels not CO2 levels.

Hyperventilation Syndrome

- Breathing over 40 and shallow.
- Blow off too much CO2.

- Carpal/pedal spasms.
- Emotional support.
- Care: NO PAPER BAG.
- Care: Use a simple face mask at 2 LPM.
- Care: DO NOT use non-rebreather at 2 LPM unless you remove both flaps.

#### Plural Effusions

- Fluid collects in plural space of chest.
- Unexplained major weight gain.
- Drained out with needle.

#### Pulmonary Edema

- Most common cause of fluid in the lungs is CHF or irritant.
- If smoke inhalation or inhaled overdoses cause tissue swelling in lungs.
- LCHF causes backing up of blood in the lungs.