**Respiratory Outline**

Functions of the Respiratory System

Organs of the Respiratory System (Structure and Function of Each)

* Nose
  + Conchae
  + Palate
  + Paranasal Sinuses
* Pharynx
  + Naso, Oro, Laryngo
  + Pharyngotympanic tube
  + Tonsils
* Larynx
  + Epiglottis, Thyroid Cartilage
* Trachea
* Bronchi
* Lungs
  + Serosa (Parietal and Visceral/Pulmonary Pleura), Pleural Fluid
  + Alveoli
    - Macrophage (“Dust Cells”), Surfactant, Alveolar Pores

4 Events of Respiration (\*Know what happens in each event)

1. Pulmonary Ventilation (Normal Breathing)

2. External Respiration (Lungs and Blood)

3. Gas Exchange -Diffusion (Bicarbonate – CO2 and Oxyhemoglobin – O2)

4. Internal Respiration (Blood and Tissues)

Pulmonary Ventilation

* Inspiration vs. Expiration
* Intrapleural Pressure
* 2 Breathing Muscles (Diaphragm and External Intercostals)

Respiratory Volumes and Capacities

* Tidal Volume, Inspiratory Reserve, Expiratory Reserve, Dead Space Volume, Residual Volume, Vital Capacity

Neural Regulation

* Medulla and Pons, Phrenic and Intercostal Nerves
* Hyperventilation vs. Hypoventilation
* Non-Neural Factors
  + Physical, Volition, Emotional, Chemical

Respiratory Disorders /Homeostatic Imbalances

* COPD, Chronic Bronchitis, Emphysema, Lung Cancer
* IRDS, Cystic Fibrosis, Asthma