**Advanced Human Anatomy and Physiology: Respiratory System Review**

1. What is the primary function of the respiratory system? **Gas exchange**
2. What are the secondary functions of the respiratory system? **Air distributor, humidification, filtering**
3. What is respiration? What is the difference between internal respiration/external respiration?

**Respiration is gas exchange between the atmosphere and cells in our body.**

**Internal Respiration is gas exchange between our cells and blood**

**External Respiration is gas exchange between blood and air in the lungs**

1. What is cellular respiration? **Cellular Respiration is when require oxygen to break down nutrients to release energy and produce ATP----when no oxygen present=fermentation**
2. What is the function of the nose? What are some of its important structures? What is the function of the nasal conchae? **The function of the nose is to breathe in air, it performs our sense of smell, filters air that enters. Nasal conchae are bones that divide the nose, nasal sinuses are air filled sacs that reduce the weight of the skull.**
3. What is the pharynx? How is it divided? **The pharynx is nicknamed the “throat” and is divided into 3 sections, nasopharynx, oropharynx, laryngopharynx (in order from top to bottom)**
4. What prevents food from entering the larynx? **Epiglottis**
5. What is the function of the larynx? **Produce your voice and sound**
6. What are the bronchi? What is the function of the alveoli? What part of the respiratory system lies within the capillary network? **The bronchi are the 2 divisions off of the trachea, one goes into each lung. The alveoli are the sites for gas exchange. The alveoli lie within the capillary network.**
7. How many lobes are there in the right lung? Left lung? **The right lung has 3 lobes, the left lung has 2 lobes**
8. What is inspiration? Expiration? **Inspiration is inhalation, Expiration is exhalation**
9. By what force does air move into the lungs? **Atmospheric Pressure**
10. Describe the process of breathing, in detail: **Diaphragm contraction (result of impulse from phrenic nerves) 🡪 diaphragm moving down. Increase in vertical diameter of thorax Increase in transverse diameter of thorax**

**Alveoli air pressure decreases about 2-3 mmHg less than atmospheric pressure. Expansion of lungs – cohesion of visceral and parietal pleuras. Air enters lungs.**

1. What is a respiratory cycle? What is the tidal volume? **Respiratory cycle is the amount of 1 inhale and 1 exhale. Tidal Volume: amount of volume that enters the lungs during 1 respiratory cycle**
2. What is the IRV? ERV? Residual volume? How much do most people have of each? **IRV: During forced inspiration, air in addition to resting tidal volume can enter lungs. This maxes out at about 3,000 mL of air. ERV: lungs can forcefully expel about 1,100 mL more than resting tidal volume.**
3. Why is it important that we always have some air in our lungs? **So that the concentrations of oxygen and carbon dioxide do not get off balance. (always trying to maintain homeostasis)**
4. How does gas exchange occur? By what gradient? **Respiratory membrane-lining of alveoli that exchanges gas between air and blood. Each gas has a partial pressure. Gas always moves from HIGH pressure to LOW pressure amounts. Oxygen goes alveoli 🡪 capillaries. Carbon Dioxide goes capillaries 🡪 alveoli**
5. Why does air always remain in our lungs? **To maintain the equilibrium between carbon dioxide and oxygen.**