Ch30.2 Respiration and gas exchange

- #Note #Biology_3 #School
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- What is the difference between Passive and active transport?: #card
    - Active transport uses energy in the for of ATP to move from a place of low concentration to a place of high concentration
    - Passive transport doesn't use energy since it goes from a place high concentration to a place of low concentration
    - What type of transport does the process of gas exchange use?: #card
        - Passive diffusion
- What cell transports oxygen in the blood?: #card
    - Red Blood Cells (RBCs)
    - What makes it capable of doing so?: #card
        - Hemoglobin
        - What is Hemoglobin? #card
            - Hemoglobin is a protein that contains iron binding sites for oxygen.
            - It's only found in RBCs*
            - How many iron binding sites does a single RBC have? #card
                - 4 iron binding sites thus 1 RBC can hold 4 oxygen molecules at a time
- Describe the process of oxygen and carbon dioxide exchange: #card
    - Oxygen and Carbon dioxide are carried by the blood to and from the alveoli
    - Oxygen diffuses from alveoli into capillary
    - oxygen binds to hemoglobin in red blood cells (RBCs)
    - Carbon dioxide diffuses from capillary to alveoli
- What part of the brain regulates breathing?: #card
    - The brain stem. Pons to be exact.
- 3 examples of lung diseases: #card
    - Emphysema (destroys alveoli)
    - Asthma (constricts airways (bronchi or bronchioles))
    - Cystic fibrosis (produces sticky mucus)
    - Why is smoking the leading cause of lung diseases?: #card
        - It has many reasons mainly it's because of a chemical found in the cigarettes called nicotine.
        - Nicotine mainly blocks alveoli.
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