Ch 42.5 Notes

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Vocab

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Gas Exchange: The uptake of molecular O2 from the environment and the discharge of CO2 to the environment

Partial Pressure: The pressure exerted by a particular gas in a mixture of gases

Ventilation: Movement of the respiratory medium over the respiratory surface

Countercurrent Exchange: The exchange of a substance or heat between two fluids flowing in opposite directions

Tracheal System: A network of air tubes that branch throughout the body

Lungs: The localized respiratory organs

Larynx: The upper part of the respiratory tract

Trachea: The windpipe

Bronchi: The trachea branches into two \_\_\_\_

Bronchioles: The bronchi branch repeatedly into finer and finer tubes called \_\_\_\_

Alveoli: Where gas exchange happens in mammals

Surfactant: A mixture of phospholipids and proteins

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Gas exchange occurs across specialized respiratory surfaces

Organs of the Respiratory System

Mouth/nose

Pharynx

Larynx and Trachea

Bronchi/Bronchioles

Lungs/Alveoli

Mouth/nose: air enters through here

* Nose: air is moistened and warmed
  + Hairs and mucus help filter air- remove dust and dirt
* Cilia: line nose and most airways
  + Wave-like motions push foreign particles out of respiratory system (away from lungs)

Pharynx

Tube-like passage at the top of the throat that receives air, food and liquids from mouth or nose

Epiglottis at the end of the pharynx

* Keeps food/liquid from entering respiratory system

Larynx and Trachea

Larynx = voice box. Triangle shaped area

* vocal cords: thick folds of tissue vibrate to make sound

Trachea = windpipe. Tube held open by C-shaped rings

Bronchi(oles) and Lungs

Bronchi: branched tubes that lead into the lungs

* Continue branching into bronchioles

Lungs: main organ of the respiratory system

Alveoli

Microscopic sacs that make up the lungs where gas exchange occurs

* Look like little grapes, inflate when you breathe in and shrink when you breathe out
* Oxygen you breathe goes into the blood from the alveoli
* Carbon dioxide from your blood goes into the alveoli

Blood vessels surround the alveoli

* Alveoli only one cell thick= large surface area

Diagram

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Diagram

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