

JA

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EMS 121EM3

Chapter 7 Class Notes

Patent – open and clear; free from obstruction

Tidal volume – the volume of air moved in one cycle of breathing

Minute Volume – amount of air breathed in during each respiration multiplied by number of beats per minute

Dead Air Space – Air that occupies the space between the mouth and alveoli, but that doesn't actually reach the area of gas exchange

Chemoreceptors – chemical sensors in the brain and blood vessels that identify changing levels of oxygen and CO_2

Plasma oncotic pressure – pull exerted by large proteins in the plasma portion of blood that tends to pull H_2O from the body into the bloodstream

Respiratory Dysfunction

- Disruption of respiratory model
- Disruption of pressure
- Disruption of Lung Tissue

Hydrostatic Pressure – the pressure within a blood vessel that tends to push water out of the vessel

Stretch Receptors – sensors in blood vessels that identify internal pressure

Blood Vessel Dysfunction

- Loss of tone
- Excessive Permeability
- Hypertension

Systemic Vascular Resistance (SVR)

- The pressure that the heart must overcome to pump into the system

Stroke volume – the amount of blood ejected from the heart in one contraction

Cardiac Output – amount of blood ejected from the heart in one minute; $\text{HR} * \text{SV} = \text{CO}$

Stroke Volume Depends on –

- Preload
- Contractility
- Afterload

V/Q Match – ventilation/perfusion match; alveoli are supplied w/enough air and air in alveoli is matched w/sufficient blood in the pulmonary capillaries to permit optimum exchange of oxygen and carbon dioxide