

RESPIRATORY VOLUMES

MEASUREMENT	ADULT MALE AVERAGE	DESCRIPTION
Tidal Volume (V_T)	500 ml	Amount of air inhaled and exhaled with each breath under resting conditions
Inspiratory Reserve Volume (IRV)	3100 ml	Amount of air that can be forcefully inhaled after a normal tidal volume inhalation.
Expiratory Reserve Volume (ERV)	1200 ml	Amount of air that can be forcefully exhaled after a normal tidal volume exhalation.
Residual Volume (RV)	1200 ml	Amount of air remaining in the lungs after a forced exhalation.
Total Lung Capacity (TLC)	6000 ml	Maximum amount of air contained in lungs after a maximum inspiratory effort. $TLC = V_T + IRV + ERV + RV$
Vital Capacity (VC)	4800 ml	Maximum amount of air that can be expired after a maximum inspiratory effort $VC = V_T + IRV + ERV$ (should be 80% TLC)
Inspiratory Capacity (IC)	3600 ml	Maximum amount of air that can be inspired after a normal expiration. $IC = V_T + IRV$
Functional Reserve Capacity (FRC)	2400 ml	Volume of air remaining in the lungs after normal tidal volume expiration. $FRC = ERV + RV$
Minute Volume (V_{min})	6000 ml	Amount of gas inhaled and exhaled in one minute $V_{min} = V_T \times \text{respiratory rate}$
Dead Space Volume (V_D)	150 ml	The amount of gas in the tidal volume that remains in the airway passages that is unavailable for gas exchange
Alveolar Volume (V_A)	350 ml	The amount of gas that reaches the aveoli in one inspiration $V_A = V_T - V_D$
Alveolar Minute Volume (V_{A-min})	4200 ml	The amount of gas that reaches the aveoli in one minute $V_{A-min} = V_A \times \text{respiratory rate}$