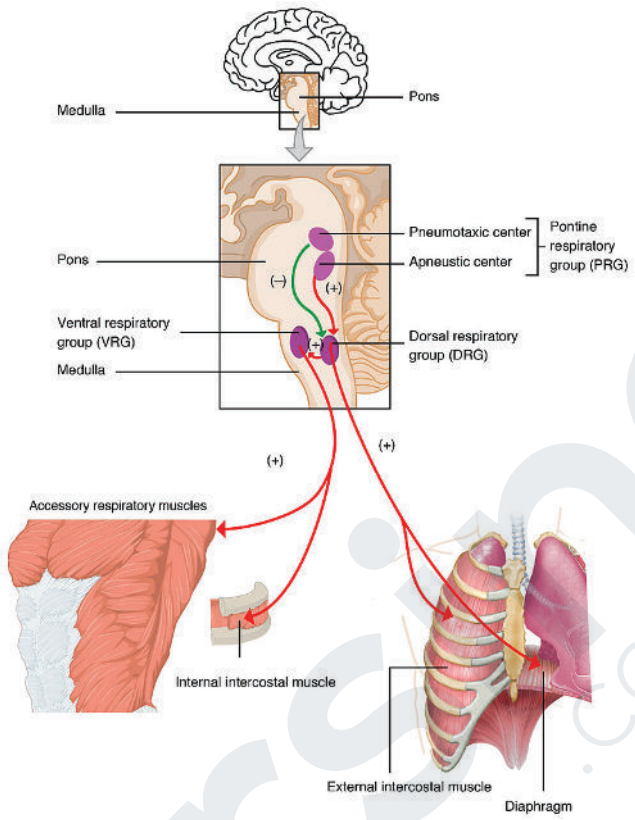
BREATHING CONTROL & MOVEMENTS



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BREATHING CENTERS

Group	Controls	Location
Dorsal Respiratory Group (DRG)	Inhalation	Medulla Oblongata
Ventral Respiratory Group (VRG)	Exhalation	Medulla Oblongata
Pontine Respiratory Group (PRG)	Exhalation	Pons
Apneustic Center	Inhalation & Rate Constant Signal to DRG	Pons

BREATHING CONTROL & MOVEMENTS

LUNG VOLUMES

	Men	Women
Tidal Volume • volume exchanged with each normal breath	500 mL	500 mL
IRV • "inspiratory reserve volume" – max air intake possible after normal breath	3000 mL	2100 mL
ERV • "expiratory reserve volume" – max exhalation after normal exhale	1200 mL	800 mL
Vital Capacity • ERV + IRV + TV	4700 mL	3400 mL
Residual Volume • air remaining in lungs after forced expiration (past ERV)	1200 mL	1000 mL
Total Lung Capacity • RV + ERV + IRV + TV	5900 mL	4400 mL
Dead Space Air • "anatomical dead space" – air from nostrils to terminal bronchioles – no gas exchange occurs here	150 mL	150 mL