Nonrespiratory Air Movements

- Can be caused by reflexes or voluntary actions
- Examples
 - Cough and sneeze clears lungs of debris
 - Laughing
 - Crying
 - Yawn
 - Hiccup

- Normal breathing moves about 500 ml of air with each breath (tidal volume [TV])
- Many factors that affect respiratory capacity
 - A person's size
 - Sex
 - Age
 - Physical condition
- Residual volume of air after exhalation, about 1200 ml of air remains in the lungs

- Inspiratory reserve volume (IRV)
 - Amount of air that can be taken in forcibly over the tidal volume
 - Usually between 2100 and 3200 ml
- Expiratory reserve volume (ERV)
 - Amount of air that can be forcibly exhaled
 - Approximately 1200 ml

Residual volume

• Air remaining in lung after expiration

• About 1200 ml

• Vital capacity

- The total amount of exchangeable air
- Vital capacity = TV + IRV + ERV
- Dead space volume
 - Air that remains in conducting zone and never reaches alveoli
 - About 150 ml

Functional volume

- Air that actually reaches the respiratory zone
- Usually about 350 ml
- Respiratory capacities are measured with a spirometer

Respiratory Capacities





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