Compliance, FRC and Respiratory Volumes

I. Compliance of the lung - Part 2
   A. Collapsing forces of the lung
      1. Surface Tension
      2. Lung elastic recoil
   B. Elasticity of the lung tissue
   C. Pressure - Volume relationship of the lung
II. Compliance of the Chest Wall
   A. Pneumothorax
   B. Pressure - Volume relationship of the chest
III. Compliance of the Lung – Chest Wall System
A. Total system compliance
B. Pressure - volume relationship of the total system
Compliance = Slope (Liters/cmH2O)
At Residual Volume

At Functional Residual Capacity

FRC

At the End of a Tidal Breath (Vt)

At Approximately 70% TLC

Chest Elastic Recoil P = 0

At Total Lung Capacity
IV. Compliance and Breathing
    A. Pressure and volume changes related to compliance
    B. Role of compliance in inspiration and expiration
    C. Functional Residual Capacity, FRC
V. Volume Divisions of the Lung
   A. FRC
   B. Vt
   C. Vital capacity, VC
   D. Residual volume, RV
   E. Total lung capacity, TLC
Subdivisions of Lung Volume

- Tidal Volume
- Inspiratory Capacity
- Functional Residual Capacity (FRC)
- Residual Volume (RV)
- Expiratory Reserve Volume
- Vital Capacity (VC)

Exercise