

# Compliance, FRC and Respiratory Volumes

## I. Compliance of the lung - Part 2

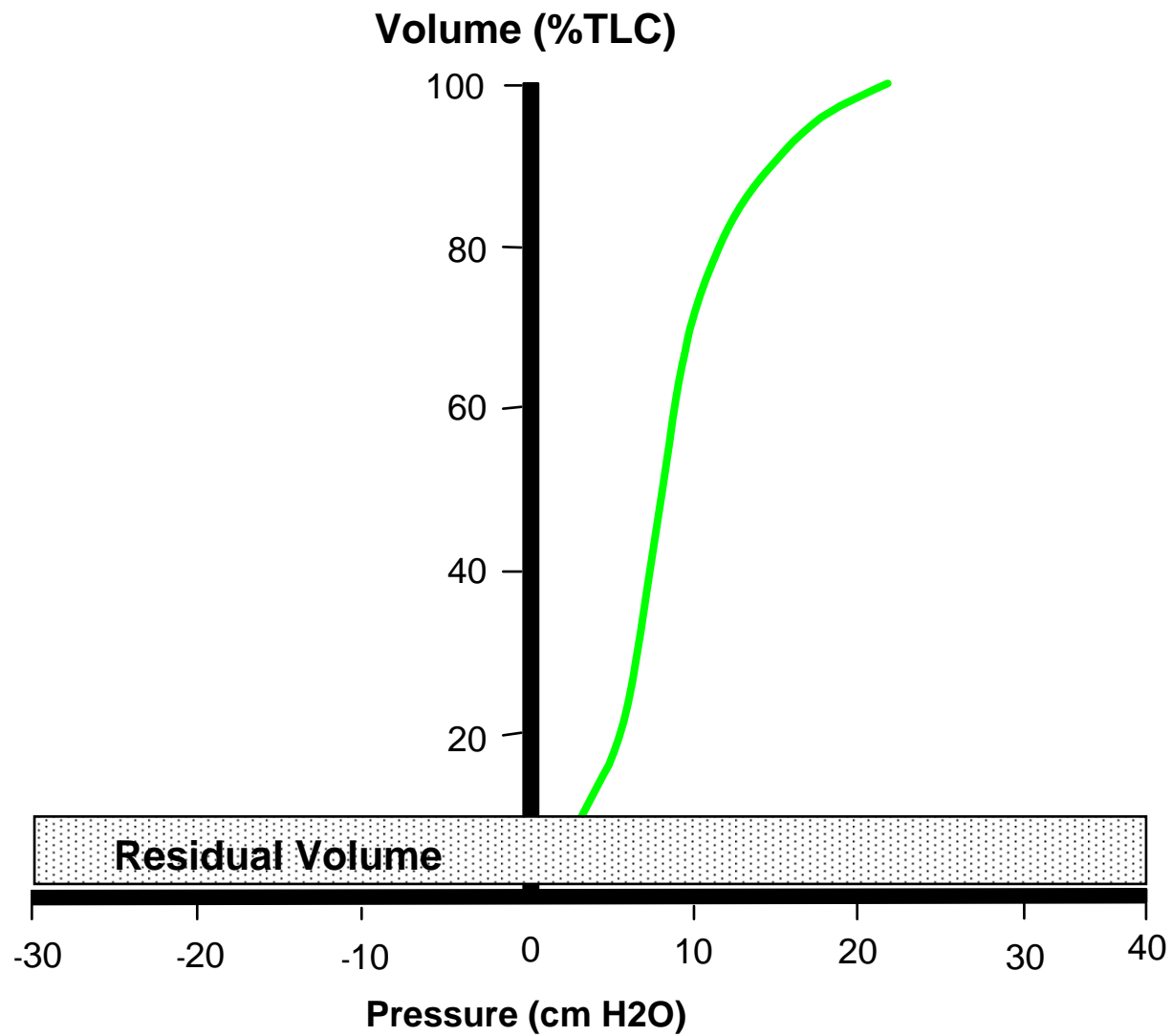
### A. Collapsing forces of the lung

1. Surface Tension

2. Lung elastic recoil

### B. Elasticity of the lung tissue

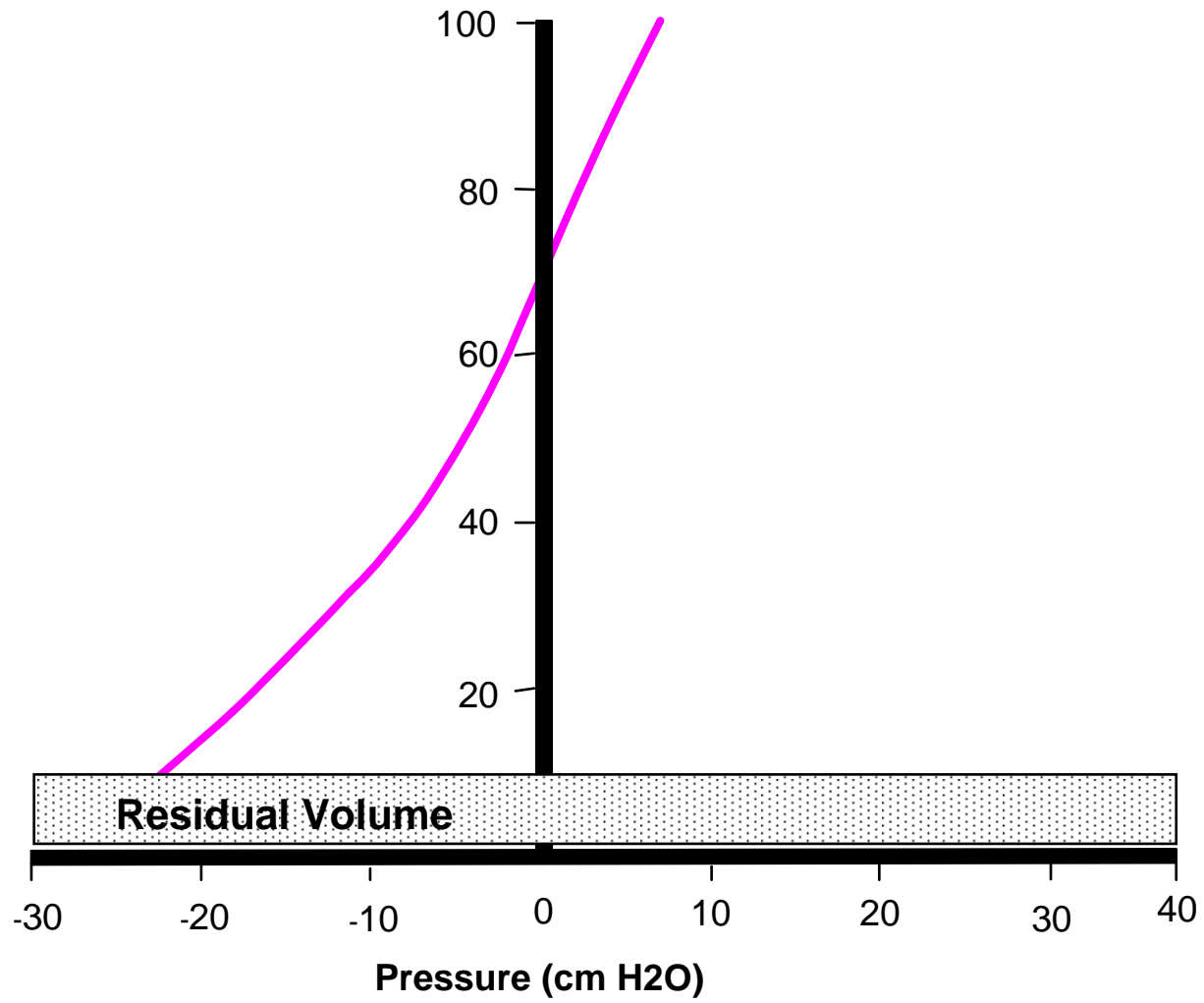
### C. Pressure - Volume relationship of the lung



## II. Compliance of the Chest Wall

A. Pneumothorax

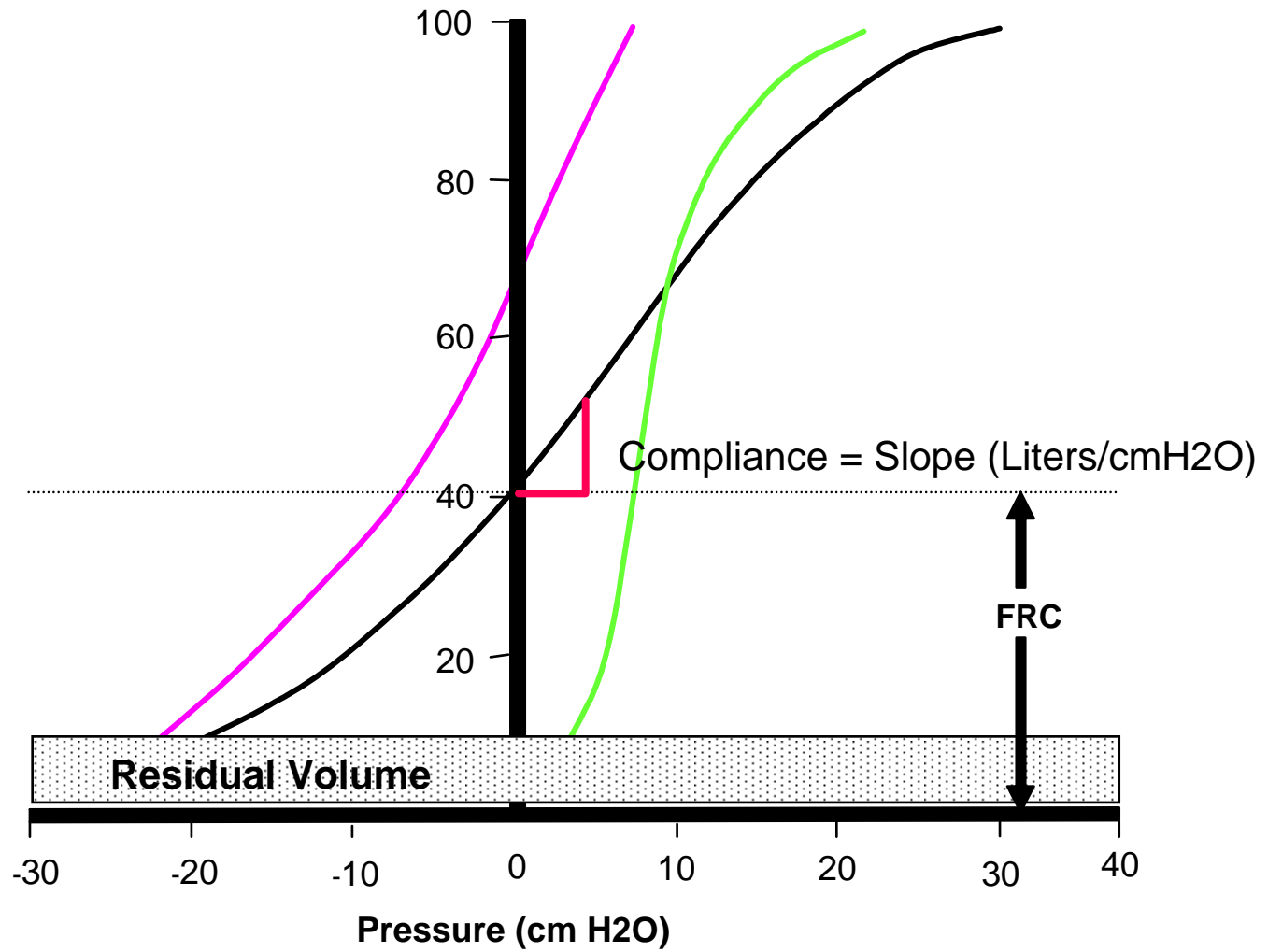
B. Pressure - Volume relationship of the chest

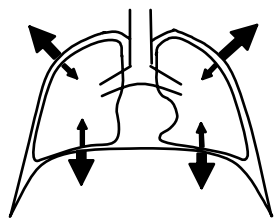


### III. Compliance of the Lung – Chest Wall System

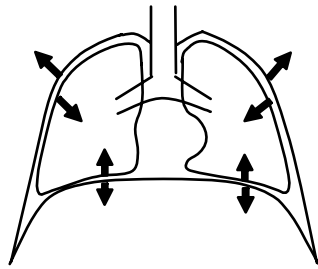
A. Total system compliance

B. Pressure - volume relationship  
of the total system

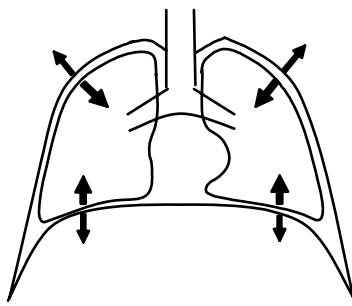




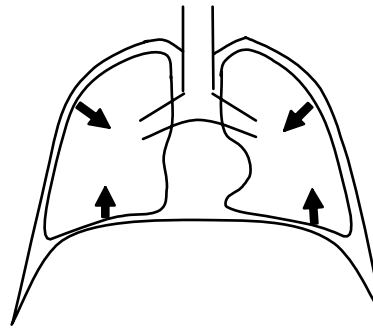
At Residual Volume



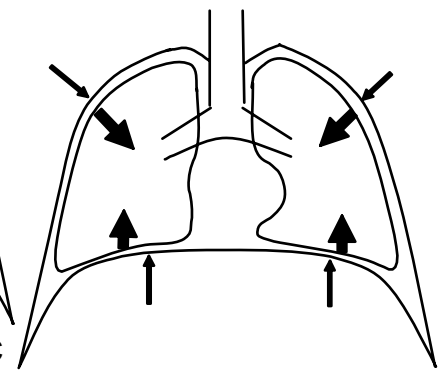
At Functional Residual Capacity  
FRC



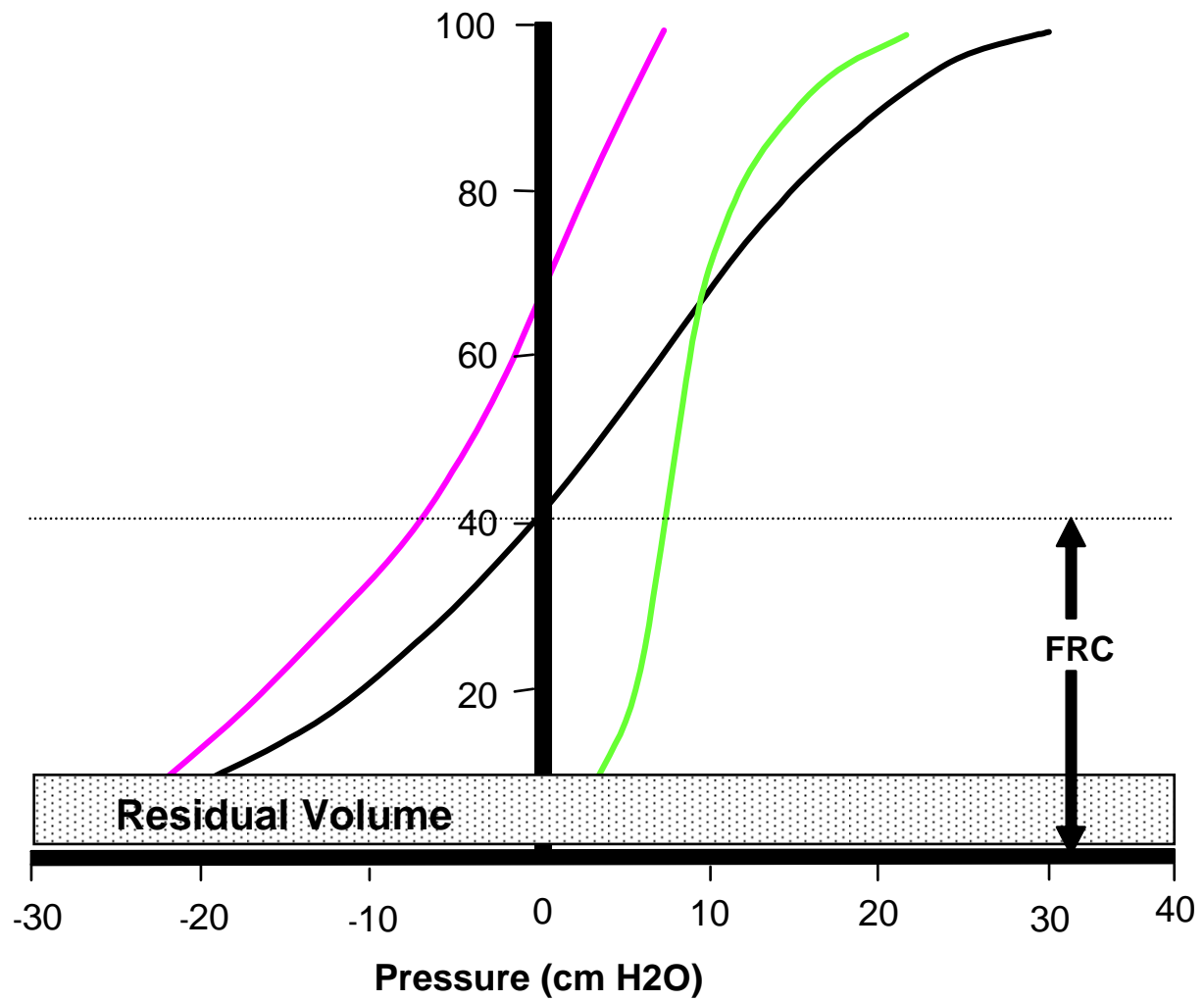
At the End of a Tidal Breath ( $V_t$ )



At Approximately 70% TLC  
Chest Elastic Recoil  $P = 0$



At Total Lung Capacity



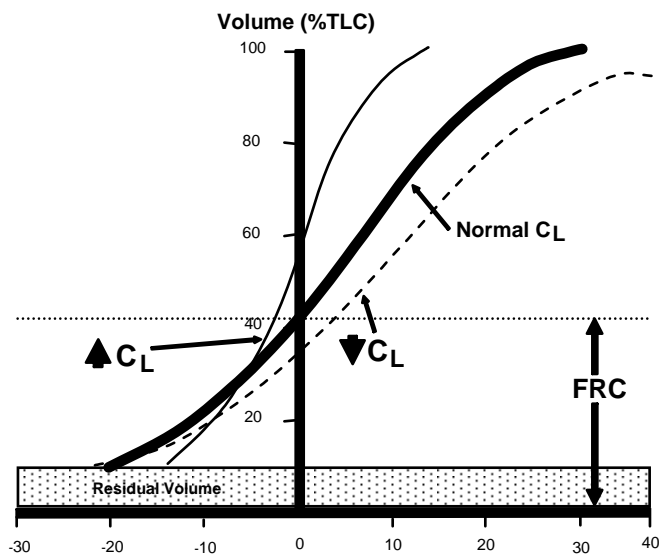


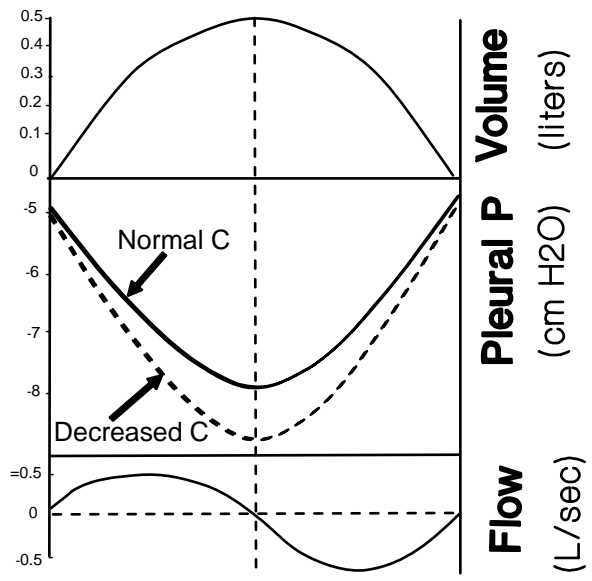
## IV. Compliance and Breathing

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

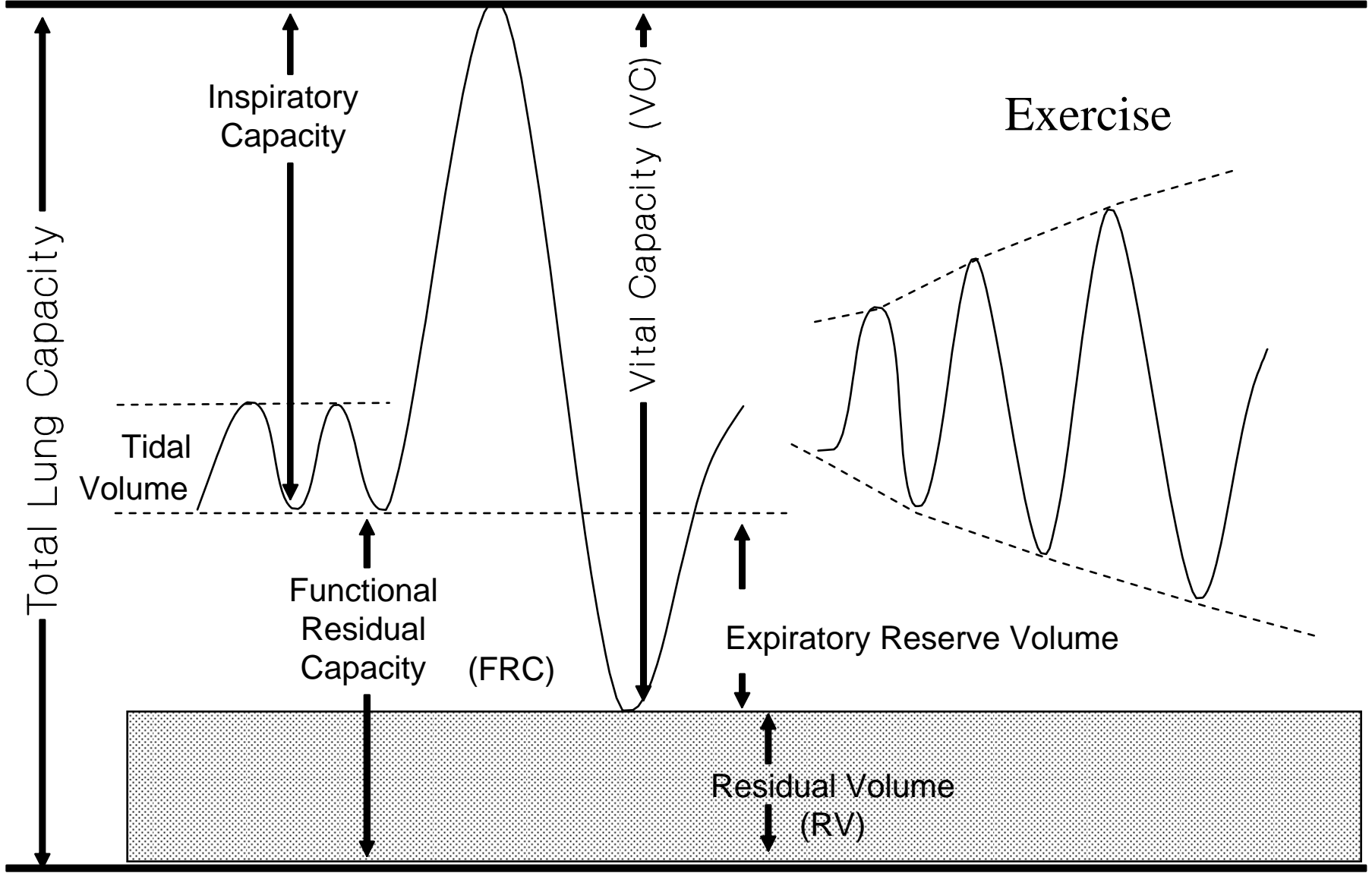
A. FRC

B.  $V_t$

C. Vital capacity, VC

D. Residual volume, RV

E. Total lung capacity, TLC



Subdivisions of Lung Volume