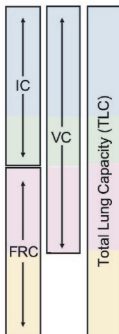
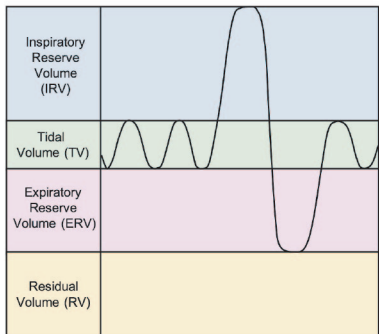


# PFTs and Pulmonary Physical Exam

## Pulmonary Function Tests

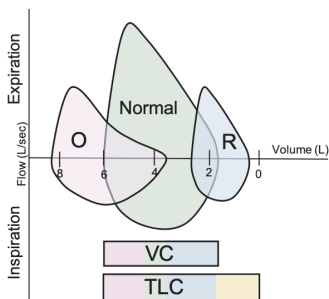


**Inspiratory Capacity (IC):** Air that can be taken in after normal exhalation

**Functional Residual Capacity (FRC):** Volume of gas in lungs after normal expiration

**Vital Capacity (VC):** Maximum volume expired after a maximal inspiration

**Forced Expiratory Volume (FEV<sub>1</sub>):** Volume that can be expelled from lungs in 1 second



**Obstructive (O):** Air trapping in lungs  
 ↓ FEV<sub>1</sub>/FVC  
 ↑ TLC, ↑ FRC, ↑ RV  
 Includes: COPD, asthma, chronic bronchitis

**Restrictive (R):** Decreased lung volumes  
 ↓ FEV<sub>1</sub>/FVC (≥80%)  
 ↓ TLC, ↓ FVC  
 Includes: interstitial lung diseases, diseases of poor breathing mechanics

## Pulmonary Physical Exam

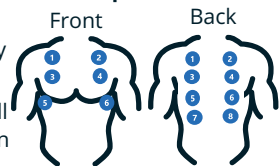
### Inspection

- Cyanosis/clubbing
- Scars/discoloration
- Respiratory rate

### Examination

- Percussion & auscultation of the lung fields
- egophony
- Tactile fremitus (99)
- Chest wall expansion

### Locations of auscultation and percussion



**Inspiratory Stridor:**  
Upper airway obstruction

### Abnormal Breath Sounds

**Wheeze:** Asthma & COPD  
**Coarse Crackles:** Pneumonia & Pulmonary edema

**Fine Crackles:**  
Pulmonary Fibrosis